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OVERSIGHT OF THE FEDERAL COMMUNICATIONS COMMISSION—THE 700 MHZ AUCTION

HEARING

BEFORE THE

SUBCOMMITTEE ON TELECOMMUNICATIONS AND THE INTERNET

OF THE

COMMITTEE ON ENERGY AND COMMERCE

HOUSE OF REPRESENTATIVES

ONE HUNDRED TENTH CONGRESS

SECOND SESSION

April 15, 2008

Serial No. 110–106

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[1] Mr. McEwen did not answer submitted questions for the record.

[2] Mr. O'Brien did not answer submitted questions for the record.

OVERSIGHT OF THE FEDERAL COMMUNICATIONS COMMISSION—THE 700 MHZ AUCTION

TUESDAY, APRIL 15, 2008

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON TELECOMMUNICATIONS AND THE INTERNET,
COMMITTEE ON ENERGY AND COMMERCE,
Washington, DC.

The subcommittee met, pursuant to call, at 9:35 a.m., in room 2123 of the Rayburn House Office Building, Hon. Edward J. Markey (chairman of the subcommittee) presiding.

Members present: Representatives Markey, Doyle, Harman, Gonzalez, Inslee, Eshoo, Stupak, Engel, Green, Capps, Dingell (ex officio), Stearns, Upton, Shimkus, Pickering, Fossella, Bono Mack, Walden, Terry, Blackburn, and Barton (ex officio).

Staff present: Amy Levine, Mack Seifert, Tim Powderly, Maureen Flood, Colin Crowell, David Vogel, Philip Murphy, Neil Fried, and Garrett Golding.

OPENING STATEMENT OF HON. EDWARD J. MARKEY, A REPRESENTATIVE IN CONGRESS FROM THE COMMONWEALTH OF MASSACHUSETTS

Mr. MARKEY. Good morning.

The recently completed auction for licenses in the 700 MHz band had a certain Dickensian quality to it. It was the best of auctions and the worst of auctions simultaneously. First, despite the so-called D block license not selling, the auction raised over $19 billion. This is no small feat in current economic conditions.

Second, I am pleased that the C block license did sell successfully. This license for which the Commission had the wisdom to adopt openness requirements that I strongly advocated for will unleash hundreds of millions of dollars in investment in wireless devices and applications and create new jobs in an economy that sorely needs them.

I congratulate Chairman Martin and all of the commissioners for this initiative. However, in spite of these success stories, this is essentially a tale of two auctions and so with the good news, there is also some bad news. Obviously the D block is disappointing, yet I believe that pursuing ways for public safety entities and the private sector to partner toward achieving a network that possesses nationwide interoperability and broadband capability remains our best option going forward on the D block.

There are several routes toward realizing an interoperable state-of-the-art network for public safety entities, however, and multiple ways of implementing public-private partnerships. I encourage the Commission to be open to new ideas in this area. If the Commission takes the opportunity to weigh new proposals that correct deficiencies in the previous plan, puts in place barriers to unjust enrichment, clarifies important details prior to a re-auction and recalibrates the D block license conditions to account for what has transpired in the recently completed auction, the D block's recent failure to sell may ultimately prove fortuitous and we may yet achieve a successful re-auction that can advance several public policy objectives simultaneously.

Finally, we must also remember that the sheer amount of money that an auction brings in to the Treasury is only one of many objectives that Congress instructed the FCC to try to achieve in this or any auction. Last Friday, I released a report from the Government Accountability Office on media ownership issues. That report highlighted the abysmal track record in our country of having women-owned and minority-owned radio and television broadcasting licensees. Those broadcast licenses were originally given out in the 1940s and the 1950s. We cannot go back in time to correct the unfairness of distributing these public assets in such unbalanced form, and it is difficult in the broadcasting area to correct this injustice now unless an incumbent wishes to sell their license.

Yet in wireless, we have a new opportunity with the beachfront property of the spectrum, and what is the result so far? Well, at present it looks like two megaresorts are going up on the beachfront in the form of Verizon and AT&T solidifying their wireless market and spectrum real estate positions. Yes, EchoStar has won almost a nationwide footprint not to compete with Verizon and AT&T in the mobile wireless market but rather to have spectrum as an adjunct to their satellite television service. Women-owned and minority-owned businesses did not break through. There is no new national competitor to provoke new broadband competition, innovation, and consumer choice coming out of the auction. As a result, the wireless third pipe to compete with the telephone and cable industry is proving either elusive or simply allied with one of the two existing providers in much of the country. This is too cozy and not nearly competitive enough.

The decision to eliminate spectrum caps by the FCC under Chairman Powell is proving highly ill-considered. Spectrum caps had ensured that incumbents couldn't gobble up all of the available spectrum and effectively box out would-be competitors from reaching the market. And the so-called spectrum screen of 95 MHz that has substituted for the original cap has been blown away in this auction by AT&T and Verizon in eight of the top ten markets and 17 of the top 25 markets where that amount of spectrum has now been exceeded.

The FCC must revisit these policy decisions in light of the recently completed auction and take corrective action going forward. The Commission has the responsibility to learn from the licensing mistakes of the past and to widely disseminate licenses and promote greater broadband competition and should endeavor to do so.

I look forward to working with each of the commissioners as they wrestle with all of these policy issues in the weeks ahead. We have two excellent panels today. I look forward to hearing from our witnesses.

Mr. MARKEY. The time for the opening statement of the chair has expired. I now recognize the gentleman from Florida, the ranking member of the Committee, Mr. Stearns.

OPENING STATEMENT OF HON. CLIFF STEARNS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF FLORIDA

Mr. STEARNS. Good morning, and thank you, Mr. Chairman. I think your comment about "a tale of two cities" is perhaps good because the recently completed 700 MHz auction has some good and some bad. Perhaps this hearing could be a movie called "May Yet Achieve" in our attempts to try and solve some of the problems that were created.

Auction of this 700 MHz spectrum was enabled, of course, by this subcommittee in enacting the DTV transition. Other than the C block open access spectrum and the D block public safety spectrum, auction 73 did achieve excellent results for the taxpayers, to whom the airwaves do belong. While the auction raised $19 billion, many of us including yourself, I think, would agree that it could have done better. Although the CBO estimated that the auction would raise just over $12 billion, there are other studies, Mr. Chairman, that suggest the spectrum was worth anywhere up to $30 billion. With that in mind, I ask unanimous consent to introduce one of those studies by the Brattle Group into the record.

Mr. MARKEY. Without objection, it will be included.

[The information appears at the conclusion of the hearing.]

Mr. STEARNS. These studies appear to have been right, considering the C block may have sold for half of its value because of the open access condition and of course, as you mentioned, the D block did not sell at all.

My colleagues, furthermore, the auction failed to produce a candidate to build a nationwide public safety network. I, along with Mr. Barton and 14 other members of both sides of this aisle, bipartisan, warned on June 29 of last year in a letter to the FCC that this would happen. We predicted this. I ask unanimous consent, Mr. Chairman, that this letter also be made part of the record.

Mr. MARKEY. Without objection, it will be included in the record.

[The information appears at the conclusion of the hearing.]

Mr. STEARNS. So the question is, we offered the possibility this might happen, sort of a Cassandra type of prophecy, but the FCC went ahead anyway, even though we sort of, it appears, predicted this outcome. Perhaps the FCC should have heeded our warning or at least replied to us and said you are all wet, but we didn't hear from them. So I guess the question is, under the circumstances—in our letter from Mr. Barton, the ranking member, Mr. Barton, why did we go forward anyway?

Furthermore, what are the FCC's plans to remedy the problem or, as you mentioned, Mr. Chairman, in your opening statement, may yet achieve what success can we yet achieve? How can we ensure that the FCC, in the urgency to clean up the mess, doesn't rush to judgment and perhaps make additional poor judgment? The

FCC's conditions allowed companies such as Google to ride free rather than seriously challenge a bid to AT&T and Verizon, and I suspect that if Google had been interested in more than just maneuvering within the system, it could have prevailed in the C block and become a new entree but, according to the April 4, 2008, New York Times, Google's goal was not to win but to make sure that the reserve price was met. I suppose we cannot really blame them for trying to get free access to the spectrum. What is more concerning is that even though we knew what they were doing, we let them maneuver this way anyway.

But now that the auction is behind us, I am excited, like my colleagues are, about the plans for deployment of the spectrum and what it means obviously for the consumers of this country, particularly with respect to the deploying of 4G wireless services. These new services and applications will be limited only by the imagination. The future for wireless consumers never looked brighter and I look forward to hearing more about this today.

And lastly and most importantly, I want to focus on public safety interoperability and the D block. Achieving public safety interoperability remains a top priority and we are all disappointed in the results of the D block. There was only one bid, at $472 million, which was a mere one-third of the reserve price. However, in hindsight, the results are not all that surprising, given the cost challenges of building and operating a network from scratch, coupled with the conditions imposed on the spectrum by the FCC. That said, we must take stock of what went wrong with the D block and consider any and all alternatives.

Mr. Chairman, one option is to do what we proposed in our letter, that Ranking Member Barton proposed and we all signed onto in the first place: auction the D block for commercial use and let public safety negotiate with all comers for construction of a network outside the confines of an auction. First responders might still be able to gain access to an additional 10 MHz of spectrum in exchange for giving a commercial partner subscriber revenue and access to the separate 24 MHz the DTV legislation cleared for public safety. If there were a consensus, Congress could also pass a law allowing public safety to use the proceeds from the re-auction.

So Mr. Chairman, there is a suggestion for how we may yet achieve in this tale of two cities, and I look forward to this hearing and I appreciate your providing it.

Mr. MARKEY. The gentleman's time has expired. The chair recognizes the gentleman from Pennsylvania, Mr. Doyle.

Mr. DOYLE. Thank you.

Mr. MARKEY. I am sorry. Excuse me. If the gentleman would hold, the chair notes the arrival of the chairman of the full committee, Mr. Dingell. The chair recognizes the gentleman from Michigan, Mr. Dingell.

OPENING STATEMENT OF HON. JOHN D. DINGELL, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MICHIGAN

Mr. DINGELL. Mr. Chairman, I thank you and I commend you for holding the hearing and I want to express my thanks to our distinguished witnesses for appearing before us today.

The goal of the subcommittee is twofold. First, we examine the results of the 700 MHz auction and consider how these results will affect the public interest, the consumers, and the industry. We also want to look at the public safety D block where the auction failed. We must consider how the Federal Communications Commission can craft a workable plan for the D block that will bring true interoperability for our Nation's first responders.

At the outset, I congratulate the Commission for its courage in adopting open access requirements for the C block. I note with approval that as a result, Verizon Wireless is already taking concrete steps to open the network. I commend them for that action. The Committee will be watching these matters closely, and the Commission should do so as well. I also look forward to learning more about the announced plans of AT&T and other carriers to provide for more openness. If done correctly, we will see more technological innovation and greater consumer choice.

I am particularly interested in how our witnesses view the results of the auction. For instance, should we be concerned that new entrants for broadband services have emerged from the auction? Should it be a matter of concern that the Nation's largest carriers came away with the most spectrum? How should this increase in spectrum consolidation guide our discussions, if at all?

The most important issue, however, is that of public safety interoperability. There is high concern, which I share, as to how to proceed with the re-auction of the D block. This is an opportunity for the Committee and for the Commission to make sure that our Nation is more secure and has given our first responders a crucial tool they desperately need. I urge my colleagues to keep this goal in mind and proceed deliberately and carefully, as indeed we should do.

I support the concept of public-private partnerships for very practical reasons. We can all agree that the state of public safety interoperability must be improved upon. This problem cannot be solved solely at the State or local level. This is a national problem, requiring federal participation. The public safety community does not have sufficient funds to do it themselves, and the spectrum is a national resource.

I believe the Commission, public safety, and the industry should continue to work together to craft a viable solution. If done correctly, the private sector will help provide a world-class interoperable public safety network. I ask the Commission to make a serious, exhaustive effort to solve this problem. I am also open to other ideas and I expect that we will receive thoughtful analysis from today's witnesses.

That said, I am presently unmoved by suggestions that we should simply auction the 10 MHz D block for purely commercial use and to hand the proceeds to public safety. This is a fine opportunity to squander not only a resource but massive amounts of money, which are desperately needed to provide the services which can properly be provided by a proper auction and proper use of this part of the spectrum. At this moment I consider such an approach to be an admission that we are not serious about obtaining true interoperability. It is much more important to me and should be much more important to the Commission and everyone else that we take the time necessary to craft a workable plan and that we do the things necessary to assure that that workable plan is properly implemented.

I thank you for your courtesy, Mr. Chairman.

Mr. MARKEY. The chairman's time has expired. The chair recognizes the gentleman from Michigan, Mr. Upton.

OPENING STATEMENT OF HON. FRED UPTON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MICHIGAN

Mr. UPTON. Thank you, Mr. Chairman. I too would like to welcome our FCC commissioners back.

By some measures, the 700 MHz auction was a success, but by others we missed our mark and we failed to live up to the full potential of this landmark spectrum sale. From the beginning, I viewed the auction rules that the FCC put into place as an experiment. I believe that the experiment shorted the taxpayer perhaps billions of dollars in auction revenue and left the public safety spectrum in an uncertain state. I have always been a staunch defender of the taxpayers. Our folks back home deserve the most out of that auction. Taxpayers will receive nearly $19 billion in the auction proceeds, an impressive number nearly double what the CBO predicted, although industry experts and some of us on this committee always believed that the spectrum would in fact fetch even more than the $20 billion had it not been for the Commission's open access social engineering in the C block. We feel that we have been shortchanged.

The free markets do work best and successful auctions work best without encumbrances. Google, by its own admission, was successful in gaming the system to achieve its goals without having to purchase a spectrum block or build out the network. Google is one of the richest companies in the country with a market cap of $140 billion. That is $40 billion more than Verizon. Google was within striking distance of Verizon's winning bid, yet Google never even made an attempt to top it, and without the open access rules, Google would have had more incentive to win the auction and would have been free to operate the network as it proposed.

Clearly the auction yielded a wide variety of winners. According to the Commission, a bidder other than a nationwide incumbent won a license in every market, and 99 bidders other than the nationwide wireless incumbents won 754 licenses, representing almost 70 percent of the 1,090 licenses sold in the 700 MHz auction. In the B block, there were 87 different license winners. In the E block, EchoStar's frontline wireless won 168 licenses. And at the end of the day, I am confident that consumers all across the country will cheer the deployment of the 700 MHz spectrum which will bring not only the benefits of increased access to broadband, but also the rollout of 4G services. This represents an exciting evolution in the wireless marketplace.

At past hearings and in a letter to the FCC that Mr. Stearns referenced, we all expressed our skepticism with the proposal to combine the first responder network with a commercial broadband network to create a public-private nationwide interoperable broadband public safety network. I wish that I was wrong but the experiment in fact was a failure at the expense of public safety. Auction participants were reluctant to bid on the 10 MHz of D block spectrum and, given the investment needed, potential bidders avoided this block since they did not know in advance all the terms of the public-private partnership. As a result, that D block auction was a failure.

Lastly, I want to express my concern with the Commission's allegation of resources at the critical moment. Public safety and the successful DTV transition should be the top priority of the Commission. I don't see how the FCC can hope to be an effective proponent of the digital TV transition if it gets sidetracked by contentious policy debates, such as proposed mandates on wholesale a la carte and price controls on TV programming. I wish to urge the Commission to stay focused on the task at hand so that we don't move down the other road.

Thank you, Mr. Chairman.

Mr. MARKEY. The gentleman's time has expired. The chair recognizes the gentleman from Pennsylvania once again, Mr. Doyle.

OPENING STATEMENT OF HON. MIKE DOYLE, A REPRESENTATIVE IN CONGRESS FROM THE COMMONWEALTH OF PENNSYLVANIA

Mr. DOYLE. Thank you. Mr. Chairman, it was 1980, right around tax day, just like today. I had gotten a pretty good tax refund that year and I was going to this electronics show and I came home with a Zenith Advanced System III console television, and the reason why I bought it, Mr. Chairman, is it had a space phone, so you hook it up and if you get a phone call, your television rings, the set mutes the volume off and you get to talk to the person over the television speakerphone. I thought it was a brilliant idea until I was in the middle of watching a Steelers game and my set kept cutting off to get calls from telemarketers. My son, 28 years later, still has that television set in his house.

But Mr. Chairman, the point I am making, the only reason that set was available was because of FCC Carter phone regulations that allowed for competitive phone products. As some talk about the exciting future potential for home networking, Internet connected devices and more, I have to say, been there, done that, have the manual somewhere in my attic.

So I want to thank Chairman Martin and the members of the Commission who voted for the item at the FCC that would spur innovation for devices and applications that will use the C block. I look forward to seeing how Verizon, the winner of the C block, will implement those rules across their entire spectrum for their open development initiative, and I will continue to closely watch this to make sure that those rules spur a new openness across all of the wireless industry.

But Chairman, the results of the auction did not fulfill all of its promises. I agree with what several of the commissioners here have said, that the auction could have been about more than revenue or open devices. For instance, we did not find a bidder willing to build a national public safety broadband network. We need to figure out why before trying to fix it. We also get to meet the new wireless boss. They are the same as the old boss. Among the top markets, only one, Boston—that is a strange coincidence, Mr. Chairman—

will see a new company come in and compete. AT&T and Verizon won the entire spectrum in most metropolitan areas. Perhaps blind bidding, bidding credits, and designated entity rules help, but maybe it is market power that is the best determinate of who wins an auction. Perhaps we should have done what the Conservative Party in Canada did late last year and prevented incumbents from participating. Perhaps we need to make sure we won't get fooled again on creating new competition.

Mr. Chairman, with those questions in mind, I look forward to hearing from the witnesses today and I yield back the balance of my time.

Mr. MARKEY. The gentleman's time has expired. The chair recognizes the gentleman from Illinois, Mr. Shimkus.

Mr. SHIMKUS. Thank you, Mr. Chairman. I will reserve my time for questions.

Mr. MARKEY. The gentleman reserves his time. The chair recognizes the gentleman from Mississippi, Mr. Pickering.

OPENING STATEMENT OF HON. CHARLES W. "CHIP" PICKERING, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MISSISSIPPI

Mr. PICKERING. Thank you, Mr. Chairman. Thank you for this hearing.

As we consider how to successfully achieve the objectives as we go forward, I think there are three primary public interests. One, public safety. Our first constitutional obligation is to meet those needs, and as we look at post-9/11 and post-Katrina, I believe that the same critical urgency exists that we have yet to achieve as policymakers in creating a national interoperable public safety network. So that should be our first priority.

Second, we should maximize competition. Now, why should we maximize competition higher than maximizing revenues? Because for free market capitalism to work, we do not need undue concentration, and for Republicans from Roosevelt to Reagan, with the breakup of AT&T, they understood the more competitors you have, then the greater the investment and innovation, and the greater the freedom for people all across the country. If we look at 1993 and the rules that came out that took us from a duopoly in wireless service to up to seven competitors in a market, no one could argue that that policy decision of maximizing competition in wireless markets led to an explosion of service and investment. We do not want to see a retrenchment from seven competitors down to 3 or 4 or 5 years from now just two competitors. A duopoly, as Wall Street and private equity experts have testified before this committee, will lead to a decline in investment and a punishment of the incumbent carriers if they try to deploy broadband services. So first, public safety. Second, we need to look at how we can maximize competition when in so many of the markets we are now exceeding the FCC merger condition of the Dobson purchase of 95 MHz per market.

So we are seeing undue concentration, we failed on the public safety, and the third thing, and it should be in this order, is to try to maximize the revenues to the taxpayers, and if we can do in the first two, then look at how we can, I believe, increase what was the reserve price, I think that we can achieve all three objectives in a very effective manner.

I look forward to hearing from the panel today as we talk about these things. Thank you very much.

Mr. MARKEY. The gentleman's time has expired. The chair recognizes the gentleman from Texas, Mr. Gonzalez.

Mr. GONZALEZ. I waive opening.

Mr. MARKEY. The gentleman waives his opening statement. The chair recognizes the gentlelady from California, Ms. Eshoo.

OPENING STATEMENT OF HON. ANNA G. ESHOO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Ms. ESHOO. Thank you, Mr. Chairman, for holding this hearing, and welcome to the Commission.

I can't help but think that the recent auction will probably not be duplicated in my lifetime. I think this is the Super Bowl of auctions and certainly the dollars that have come in are very important and how history will view this auction obviously has yet to be determined, but I do think that it is important to try and look at it, examine it through a historic lens. We know that about 70 percent of the spectrum was won by two companies. There is not a new nationwide licensee and the status of the public safety spectrum remains in considerable doubt, and I think each one of my colleagues has made some reference to that.

I am pleased that the C block, which contained important new access provisions, met the reserve and was won by Verizon, and I am eager to see how Verizon is going to implement these requirements and promote greater openness in the wireless industry. It is very, very important for the people of our country. I think it is important for auction winners to understand that they don't own public airwaves in fee simple. That is a notion that if anyone is attached to it really needs to be discarded. As licensees, they hold spectrum in a public trust, and I think that we have gotten way off base with this in our country and it is troubling to me, I think it is troubling to others, and I think the people in our country really care about it. It is an agreement that obligates the companies to utilize the spectrum in the public interest in exchange for their exclusive control.

So the Commission has an obligation always to act in the public interest. I am concerned that there has been a decision to quickly re-auction the D block, which may continue the failed policies that led us to where we are now. Without a D block licensee, I think that the Commission has to undertake a more thoughtful process that produces a licensee that has the resources to quickly build out a public safety network. It is a high obligation that the Congress has and the FCC has. So, the innovation for the spectrum I think is boundless and I hope its limitless uses will be fully realized by the American people.

So I look forward to questioning the commissioners, and Mr. Chairman, thank you for holding this important hearing.

Mr. MARKEY. The gentlelady's time has expired. The chair recognizes the gentleman from Oregon, Mr. Walden.

Mr. WALDEN. Mr. Chairman, I am going to waive opening statement.

Mr. MARKEY. The chair recognizes the gentleman from Nebraska.

Mr. TERRY. Waive opening.

Mr. MARKEY. Mr. Terry along with Mr. Walden have waived their time and their time will be reserved. The chair now recognizes the gentleman from Michigan, Mr. Stupak.

Mr. STUPAK. Mr. Chairman, I am going to waive and save my time for questions.

Mr. MARKEY. The chair recognizes the gentlelady from California, Ms. Capps.

OPENING STATEMENT OF HON. LOIS CAPPS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Ms. CAPPS. Mr. Chairman, I want to thank you for holding this very important and timely oversight hearing. I thank our commissioners for once again appearing before our committee.

I would point out, as has been mentioned already, the status of interoperability and public safety being topic number one and I want to thank all of my colleagues who have been pushing forward with this. I particularly want to acknowledge my colleague from California, Representative Harman, for drilling us on this and it is very important.

The results of the 700 MHz auction are bittersweet for all of us who followed it closely. I was happy to learn that open access requirements were triggered and hope that leads to innovations yet unknown for consumers but I am equally disappointed that participation by women and minorities was negligible and that the D block failed to attract a winning bid. From my perspective, the creation of an interoperable public safety network was by far the most important aspect of this auction, so I approach this hearing eager to hear where the D block auction went wrong and how we can all work together to forge a new and better plan.

Our first responders, our firefighters, our policemen, others on the frontline, need, actually must be able to communicate effortlessly in the face of incredible disaster. We have had too many lessons where it has been brought home to us that this is before us, lives depend upon it, and I am disappointed that what transpired with the D block but I do remain hopeful. I continue to believe that this Nation hast he technology, has the capacity, the expertise and the ingenuity to still and hopefully quickly make this public safety network a reality.

So I am looking forward to the testimony of our witnesses. Thank you again, Mr. Markey, for holding this hearing. I yield back.

Mr. MARKEY. The gentlelady's time has expired. The chair recognizes the gentlelady from California, Ms. Harman.

OPENING STATEMENT OF HON. JANE HARMAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Ms. HARMAN. Thank you, Mr. Chairman.

Mr. Chairman, building a national broadband network for interoperable communications is my highest priority on this committee, and as you know, I have written a letter to you and the ranking member setting out some of my thoughts about how to get there.

In my view, our work with others may bring telecommunications benefits to consumers, but the ability of public safety agencies to communicate is a matter of life and death. Nearly 7 years ago, as dust billowed from Lower Manhattan, members of this House stood on the steps of the Capitol and sang God Bless America. We said never again, never again would we let merciless killers destroy thousands of innocent lives on our soil. Never again would we be unprepared for acts of terror. But today, nearly 7 years later, we remain unprepared. Our Nation's thousands of emergency communications systems remain fragment, outdated and costly. Many first responders face the same communications problems that led to over 300 deaths on 9/11. All levels of government failed our first responders that day and we must not fail them again. The DTV transition could be our last chance for years to get this right.

Today, committee members and our witnesses will describe their ideas for achieving a national broadband network for public safety, the real measure of the DTV transition's success. Some would retain the structure of the first D block auction, some would modify it and some would do away with it. As I said in my letter to you, I do not believe we should quickly abandon the public-private partnership model. D block spectrum is the carrot to bring new, innovative commercial partners to the table. Once it is gone, we can't get it back.

No matter what we decide is the best course, several key changes are imperative. First, clarify. The FCC and the public safety spectrum trust must give bidders a sense of what their obligations are before the auction. These obligations have to be realistic. The perfect is the enemy of the good. Second, transparency. Backroom dealings and murky business relationships poison oversight and good government. The parties must explain their relationship to the satisfaction of Congress and conduct their dealings in public. Third, avoid D block light, or at least a second auction that does not correct the flaws of the first. We should act with urgency informed by hard evidence of what caused the auction to fail.

As I have often said, Mr. Chairman, our children and grandchildren, brothers and sisters and mothers and fathers in communities across America are at risk until we solve this problem. The DTV transition is about this issue, not converter boxes, not digital broadcasting. The issue is about the public interest, not self-interest. Whose interest will we protect?

Mr. MARKEY. The gentlelady's time has expired. The chair recognizes the gentleman from Washington State, Mr. Inslee.

Mr. INSLEE. I will reserve, Mr. Chairman. Thank you.

Mr. MARKEY. And that completes all time for opening statements by members of the subcommittee.

Marsha Blackburn from Tennessee is here. She is not a member of the subcommittee but by unanimous consent she could make an opening statement. I hereby make that motion. I hear no objection. The gentlelady is recognized for that purpose.

Ms. BLACKBURN. Thank you, Mr. Chairman. I appreciate the opportunity to be here. I will waive an opening statement so that we can get to the witnesses. I will submit an opening statement for the record.

Mr. MARKEY. We appreciate the gentlelady and that gesture, but just by adding that extra 30-second conversation, we have made it possible for the ranking member of the full committee, Mr. Barton, to appear in time for an opening statement, and he is recognized at this point for that purpose.

Mr. BARTON. Mr. Chairman, I am going to submit it for the record. I have been busy with my avatar and I wasn't able to get here earlier.

[The prepared statement of Mr. Barton follows:]

STATEMENT OF HON. JOE BARTON

Thank you, Mr. Chairman.

The recently completed 700 megahertz auction will benefit Americans by making spectrum available for next-generation wireless services. This was one of the reasons Congress cleared the spectrum with the DTV legislation. Still, the auction could have gone even better.

As I, along with Mr. Stearns, Mr. Upton, and 13 of our colleagues from both sides of the aisle warned in a June 29, 2007 letter, ill-conceived auction conditions cost American taxpayers $5–10 billion in lower auction revenues, encouraged Google to free ride on someone else's spectrum rather than seriously bid to build a competing wireless network, made it harder for rural and smaller providers to get spectrum, and failed to produce a candidate to build a nationwide public safety network.

Although the auction raised $19 billion, it should have raised more. True, the congressional Budget Office estimated the auction would raise $12.5 billion. But Mr. and Upton and I disagreed with that figure based on studies estimating that-unencumbered-the spectrum would raise $25-$30 billion. Those estimates proved right, considering that the open access conditions may have cut the C-block revenue in half, and the D-block did not sell at all.

Of greater concern, however, is the failure to produce a public-private partnership. We must now pick up the pieces.

We could try letting the FCC determine as many of the obligations up front and re-auction the D-block with weaker public safety requirements to attract more bidders. This runs the risk, however, of not meeting public safety's needs and still not finding a bidder. My fear is that, despite the best of intentions, trying to shoe-horn a negotiation into the middle of an auction, where neither public safety nor the commercial provider can walk away if their needs are not met, will only result in another failure. As our letter explained, setting just the right rules in advance would be more like winning the lottery than running an auction.

A second option would be to scrap the public-private partnership and oversee the public safety network ourselves. Unfortunately, the Federal Government does not understand in enough detail either First Responders' needs or how to manage an interoperable communications network for such a large endeavor to work.

A third option is to do what the FCC initially set out to do and what I endorsed in the June letter: auction the D block for commercial use and let public safety negotiate for construction of a network independently. First Responders can still gain access to another 10 megahertz of spectrum in exchange for giving a commercial partner subscription revenue and sharing some of the 24 megahertz the DTV legislation separately cleared for public safety.

The issue may be public safety funding. If that's the case, we need to address it straight on. With consensus, Congress could pass a law to use proceeds from the commercial re-auction for the public-private partnership.

I look forward to the witnesses' testimony as we tackle these issues.

I yield back.

Mr. MARKEY. I appreciate that. You know, IBM announced the very next that day that 6,000 of their employees were going to be given avatars for working with other members of the IBM empire. So I think we were really at the cutting edge, and I appreciate the chairman now having an avatar himself and I will be looking forward to seeing you in Second Life after this hearing.

But we will turn now to the Federal Communications Commission, and we welcome you back. You have been frequent visitors to this subcommittee, and this is at the very top of the priority list to get these particular issues correct for public safety and for competition reasons, and we are very honored to have you back, Chairman Martin, to represent the Commission, and if any of the other commissioners wish to make opening statements, they will be welcomed to do as well. So we will begin by welcoming Chairman Kevin Martin of the Federal Communications Commission.

STATEMENT OF KEVIN J. MARTIN, CHAIRMAN, FEDERAL COMMUNICATIONS COMMISSION

Mr. MARTIN. Thank you, and good morning as well to you, Chairman Markey, Ranking Member Barton, and all the members of the Committee. Thank you for inviting me to be here with you today to discuss our reasoning and the results of our most recent auction.

The 700 MHz auction achieved a number of significant milestones. The wireless networks to be deployed with these licenses will be significantly faster and will extend to urban and rural areas alike and they will bring increased competition to a broadband sector currently served primarily by DSL and cable, and wireless consumers will now be able to use the wireless devices and applications of their choice.

There have been some significant misperceptions about our auction and I appreciate the opportunity this morning to debunk what I would call the six myths of the 700 MHz auction. Myth number one: the auction was not a success. The auction was the largest in FCC history, raising a record $19.6 billion in bids. Even in a difficult economic climate, revenues raised in this auction will exceed congressional estimates, nearly doubling the $10 billion that Congress had anticipated would be raised. In comparison, the 2006 Advance Wireless Service Auction sold approximately 50 percent more spectrum yet generated only a one-third less revenue. Even with the open platform requirements and aggressive build-out obligations, each of these blocks sold for more than the AWS–1 blocks with comparable bandwidth and license areas.

[Slide shown.]

As this first slide shows, all other 68 auctions conducted by the FCC in the past 15 years collectively produced a total of only $19 billion in actual receipts, roughly equivalent to the amount of money raised in the 700 MHz auction. But while clearly a success in terms of dollars, this auction also obtained significant public interest objectives that benefited consumers. With open platform requirements and one-third of the spectrum, consumers will be able to use the wireless device of their choice and download whatever legal software or applications they choose. A network that is more open to devices and applications will help foster innovation on the edges of the network and give consumers even greater freedom.

Ensuring that rural and underserved areas of the country benefit from the new wireless services this spectrum offers, the Commission adopted the most aggressive build-out requirements ever applied to wireless spectrum and as a result, the spectrum will quickly be put to use by all auction winners. And finally, as I will discuss below, we created what will be new wireless broadband providers to compete with the incumbent telephone and cable companies in nearly every home in the country.

Myth number two: Verizon and AT&T won everything. In fact, a total of 99 bidders other than Verizon and AT&T won 754 licenses, almost 70 percent of the licenses sold, and a bidder other than Verizon or AT&T won a license in every market. Small businesses eligible for bidding credits were successful in the auction. Indeed, 56 of the 101 total winning bidders claimed designated entity bidding credits.

[Slide shown.]

As you can see in the next slide, Exhibit 2, this is very similar to past auctions.

[Slide shown.]

And in the next slide, we see that small businesses eligible for bidding credits won almost 35 percent of the licenses, which again is very similar to past auctions.

[Slide shown.]

And finally, as this next map illustrates, these licenses covered a large portion of the country, including primarily rural areas. In fact, much of the money spent by Verizon and AT&T, almost 70 percent, was used to obtain spectrum in only the top 15 markets. The small and rural providers won 500 licenses, covering almost 60 percent of the megahertz pops available outside of the top 15 markets. And finally, most auction winners are new entrants. Of the 101 winning bidders, 72 are new entrants who won 675 licenses.

Myth number three: Small carriers weren't able to win even in rural areas. Some have argued that small and small and rural providers were unable to win any spectrum, particularly in small communities. This is simply not true. In fact, new entrants, small and rural providers did especially well in rural areas.

[Slide shown.]

As you can see in this slide, Exhibit 5, in the A and B blocks alone, small and rural providers won spectrum that covered almost the entire country. Where they were unsuccessful was not in rural America or even in medium-sized markets, but in the 20 large metropolitan areas such as New York, Los Angeles, Dallas, Chicago, and Atlanta, and despite what some have argued, the percentage of spectrum available in smaller geographic areas was in fact comparable to what we did in AWS–1.

[Slide shown.]

As you can see in this next slide, the percentage of spectrum available and licenses that cover the smallest areas was actually higher in the 700 MHz auction than it had been in the most recent AWS auction. In the largest cities, it did not matter whether the license was a smaller CMA, a medium sized EA or a regional REAG; the large carriers won. Unless the Commission had banned the nationwide incumbents, an idea that few had advocated, small and rural providers would likely not have succeeded in the largest markets.

Myth number four: There will be no third pipe and the licenses were all won by the incumbent telephone or cable companies. In much of the country, consumers have a choice of only two broadband services, cable or DSL. Although the auction did not result in a single nationwide new entrant, in every market a third provider will be able to use a wireless broadband platform to compete against the incumbent telephone and cable companies. For example, in Chicago, Verizon is not the incumbent DSL or cable provider but won licenses in that area. The same can be said of Metro PCS in Boston and AT&T in New York City. In all of these areas, companies will provide a wireless broadband service that competes with the incumbent telephone and cable companies wireline offerings.

[Slide shown.]

In fact, as this next slide shows, a bidder other than the incumbent DSL or cable company won in almost every area of the country.

Myth number five: Everyone knows that Verizon was going to go open anyway. The auction had an impact on innovation in the wireless industry even before the bidding began. In less than a year, many wireless providers evolved from vocal opponents to vocal proponents, embracing the open platform concept. Verizon Wireless is now committed to open its entire network to devices and applications, but when the open access issue was proposed, they were adamantly opposed. For example, Verizon said to Congress last June that what most concerns us is the open access which threatens to disrupt the positive consumer experience and that open access would threaten to shift the business of wireless network operators to primarily offering subscriber airtime. In July, Verizon argued that such limits placed on devices and applications were critical to maintaining the quality of its network and serving its consumers. Finally, Verizon took the Commission to court over the open access provisions, going so far as to seek a stay of our auction. If Verizon was planning to open its network regardless, why would they pay its lawyers' fees for this court case?

And myth number six: We would have achieved a public safety network another way. During a crisis, public safety has to be able to communicate regardless of where they are from or the uniform they wear. Some critics seem to suggest that if we just auctioned the D block without conditions, a public safety network would have materialized on its own, or that we should have ignored public safety's conditions requiring a more robust network. But 6 years after September 11, there is still no nationwide public safety network in place. The simply reality is that public safety does not have the funds to build a network. It would have been better to take the auction proceeds and provide the public safety community with the resources needed to build their own interoperable network but we do not have the authority to directly fund such a network. As a result, the public-private partnership was the only means available to us to address this crucial issue. My colleagues, both Republican and Democrat, agreed. The Commission unanimously adopted the public safety private partnership approach for the D block as an innovative means to address the critical needs for our nationwide public safety.

The Commission will, however, need to take into account why the D block did not attract a successful bidder. The Commission needs to consider whether the demands that were placed on the prospective D block winner such as network expectations and build-out requirements were just too great. But absent funding legislation, I believe that a public-private partnership remains the only tool at the Commission's disposal to solve the public safety interoperability challenge.

The auction stands as the most successful FCC ever conducted but there is still more work that needs to be done and I look forward to working with the committee and my colleagues on these challenging issues in the months to come. Thank you.

[The prepared statement of Mr. Martin follows:]

Written Statement
Of

The Honorable Kevin J. Martin
Chairman
Federal Communications Commission

Before the
Committee on Energy and Commerce
U.S. House of Representatives

April 15, 2008

Summary

The 700 MHz spectrum auction closed almost one month ago. It achieved a number of significant milestones, including:

- the largest auction in FCC history, raising a record $19.6 billion in bids;
- advancing new open platform policies;
- affirming aggressive build-out obligations;
- creating what will be a new wireless broadband provider to compete with the incumbent telephone and cable companies in nearly every home in the U.S.; and
- providing small businesses, new entrants, rural providers and existing nationwide wireless providers with access to additional spectrum needed to deploy the next generation of wireless networks.

All told, 101 bidders won 1090 licenses, over half of whom (56) were small businesses taking advantage of the Commission's bidding credits program. A total of 99 bidders other than the nationwide wireless incumbents won 754 licenses – representing approximately 69 percent of the 1090 licenses sold in the 700 MHz auction. In the A and B blocks alone, small and rural providers won spectrum that covered almost the entire country.

The sheer size of this auction is a harbinger of the benefits to come. The next generation of wireless networks to be deployed in the 700 MHz Band will be faster than those available today, and will extend to both urban and rural areas of the country. These networks will bring increased competition to a broadband sector currently served primarily by DSL and cable providers. And just like users of those *wired* networks, *wireless* consumers will now be able to use the wireless devices and applications of their choice. These developments will enable the U.S. to promote broadband deployment and spread the benefits of broadband to all consumers.

Of course, one important issue remains from the previous auction – the lack of a successful bidder for the D Block of spectrum that was a part of the Public Safety/Private Partnership. Put simply, during a crisis public safety has to be able to communicate, regardless of where they are from or the uniform they wear. In the absence of the financial resources for public safety to build out their own network, we should continue to try to explore ways in which we can help facilitate using the D Block as a tool to achieve a nationwide interoperable public safety network. I believe that a Public/Private Partnership remains a viable means for achieving a nationwide interoperable broadband public safety network. More importantly, I believe it remains the only tool at the Commission's disposal to solve the public safety interoperability challenge. However, we will look at all options in considering the appropriate path, and look forward to hearing from the members with respect to their views.

Good morning Chairman Dingell, Chairman Markey, Ranking Member Barton, Ranking Member Stearns, and Members of the Committee. Thank you for inviting me to be here with you today.

Introduction

The 700 MHz spectrum auction closed almost one month ago. It achieved a number of significant milestones, including:

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- creating what will be a new wireless broadband provider to compete with the incumbent telephone and cable companies in nearly every home in the U.S.; and
- providing small businesses, new entrants, rural providers and existing nationwide wireless providers with access to additional spectrum needed to deploy the next generation of wireless networks.

All told, 101 bidders won 1,090 licenses, over half of whom (56) were small businesses taking advantage of the Commission's bidding credits program. A total of 99 bidders other than the nationwide wireless incumbents won 754 licenses – representing approximately 69 percent of the 1,090 licenses sold in the 700 MHz auction. In the A and B blocks alone, small and rural providers won spectrum that covered almost the entire country.

The sheer size of this auction is a harbinger of the benefits to come. The next generation of wireless networks to be deployed in the 700 MHz Band will be faster than those available today, and will extend to both urban and rural areas of the country. These networks will bring increased competition to a broadband sector currently served primarily by DSL and cable providers. And just like users of those *wired* networks, *wireless* consumers will now be able to use the wireless devices and applications of their choice. These developments will enable the U.S. to promote broadband deployment and spread the benefits of broadband to all consumers.

Largest Auction Ever

The 700 MHz auction was the largest auction in FCC history, raising a record $19.6 billion in bids. Even in a difficult economic climate, revenues raised in this auction well exceeded congressional estimates – nearly doubling the ten billion dollars Congress had anticipated would be raised. The $19.1 billion in winning bids and $19.0 billion in net winning bids makes this the largest auction in FCC history even without the sale of the D block. In comparison, the 2006 Advanced Wireless Service (AWS-1) Auction sold approximately 50 percent more spectrum (90 MHz compared to 62 MHz in the 700 MHz auction,) yet generated one-third less revenue (approximately $13.9 billion in winning bids and $13.7 billion in net winning bids). Even with the open platform requirement and aggressive build-out obligations, each of these blocks sold for more than AWS-1 blocks with comparable bandwidth and license areas. *See Exhibit 1.* All other 68 auctions conducted by the FCC in the past 15 years collectively produced a total of only $19.1 billion in actual receipts. *See Exhibit 2.*

The Commission made several changes to its rules that helped make this auction a record success. We implemented anonymous bidding for the first time in an auction of this size. By foreclosing opportunities for anti-competitive bidding behaviors, anonymous bidding increased the efficiency of the auction and helped ensure a fair result. Without anonymous bidding, auction revenue would likely have been substantially lower, and bidders would have had an opportunity to retaliate against smaller bidders and block new entrants.

We also changed the power limits for the A and B blocks, which were not tailored to the provision of mobile broadband services. With this modification, those blocks became much more suited to the provision of these mobile services. This made a significant difference in the attractiveness of these blocks to service providers wanting to provide mobile broadband.

Finally, we provided for a new form of combinatorial bidding that allowed bidders to bid on packages of licenses without the risk of winning only some of the licenses needed to execute their business plan. Several bidders took advantage of this new opportunity by bidding on packages during the auction, with one successfully winning a package.

An Open Platform Achieved

While clearly a success in terms of dollars, this auction also attained significant public interest objectives that benefit the consumer. Perhaps the most significant achievement of this auction is our new open platform policy. With the open platform requirements on one-third of the spectrum offered in this auction, consumers will be able to use the wireless device of their choice on those networks and download whatever legal software or applications they choose onto it. A network that is more open to devices and applications will help foster innovation on the edge of the network, and give consumers greater freedom to use the wireless devices and applications of their choice. Putting these choices into the hands of consumers, rather than network operators, will spur the next phase of wireless broadband innovation – innovation that can make us more productive, keep us entertained, and improve our quality of life.

When adopting the open platform requirement in the 700 MHz band, we saw it as a rare chance to promote innovation and consumer choice while writing on a clean slate. We targeted only one block of the spectrum. We did not propose to apply this requirement to the entire 700 MHz band or other existing networks. And we did not apply mandatory unbundling or wholesale requirements, which might undermine investment incentives. We achieved a careful balance of spurring innovation and consumer choice while encouraging infrastructure investment. I believe this minimal regulatory touch had maximum impact.

The auction had an impact on innovation in the wireless industry even before the bidding began. In less than a year, many wireless providers evolved from vocal opponents to vocal proponents, embracing the open platform concept. Verizon Wireless has committed to open its *entire* network to devices and applications for consumers. More and more wireless providers, including T-Mobile and Sprint through their participation in the Open Handset Alliance, and AT&T, are also embracing more openness in terms of devices and applications. Less than a month after the auction concluded, this interest now appears to be shared across the industry and has taken hold without the FCC imposing retroactive rules on existing investments.

Finally, some have argued that the C block should have been divided into smaller areas to ensure that smaller and rural providers could win additional spectrum. Breaking up the C block could have prevented the emergence of a nationwide open platform. The economies of scope and scale enabled by this near nationwide open platform will provide significantly greater benefits to small businesses and entrepreneurs that design wireless handsets and applications than would multiple networks with differing open platform specifications. This was a key advantage to making the C block available in large regional license areas with nationwide package bidding.

Most Aggressive Build-Out Policies Ever

To help ensure that rural and underserved areas of the country benefit from the new services that this spectrum will facilitate, the Commission adopted the most aggressive build-out requirements ever applied to wireless spectrum. These rules will ensure that the spectrum is quickly put to use by all auction winners – no matter who they are – to deploy new technologies and offer new services in both urban and rural areas of the country. If auction winners do not put their spectrum to use serving consumers, the Commission will reclaim it and make it available to someone else who will.

Small Business Success

Small businesses eligible for bidding credits were very successful in the auction that ended last month. In this auction, 56 (55%) of 101 total winning bidders claimed designated entity bidding credits as small businesses, 49 of whom are also new entrants. This is very similar to past auctions. *See Exhibit 3.* Small businesses eligible for bidding credits won 379 (35%) of 1,090 licenses - which again is similar to past auctions. *See Exhibit 4.* These licenses covered a large portion of the country primarily in rural areas. *See Exhibit 5.*

Bidding credits made a significant difference for these bidders, with designated entities winning over half of their licenses by outbidding a non-designated entity that placed the second highest bid without a bidding credit. In all, small businesses claiming bidding credits won licenses valued at over half a billion dollars, and had success in this auction similar to the success they had in comparable PCS and AWS auctions. *See Exhibit 6.*

Opportunities for New Entrants, Small and Rural Providers

The structure of the auction also provided significant opportunities for new entrants, rural providers and non-nationwide incumbents. The auction drew wide-ranging interest from a number of new players. A bidder other than a nationwide incumbent won a license in every market. A total of 99 bidders other than the nationwide wireless incumbents won 754 licenses – representing approximately 69 percent of the 1,090 licenses sold in the 700 MHz auction.

In fact, most auction winners are new entrants. Of the 101 winning bidders, 72 are new entrants who won 675 licenses. In the unpaired E block, new entrant Frontier Wireless LLC (Dish Network) won 168 licenses to establish a near nationwide footprint. *See Exhibit 7.*

Some have argued that small and rural providers were unable to win any spectrum. One recent analyst claimed, "Firms that would willingly set up shop in rural America were priced out of the market because so few frequencies were made available in licenses that only covered smaller communities."[1] This is simply not true. In fact, new entrants, small and rural providers did especially well in rural areas. In the A and B blocks alone, small and rural providers won spectrum that covered almost the entire country. *See Exhibit 8.* Where they were unsuccessful was not in rural America or even in medium size markets but in twenty large metropolitan areas such as New York, Los Angeles, Dallas, Chicago and Atlanta.

In fact, a large portion of the money spent by Verizon and AT&T - - approximately $8 billion - - was used to obtain spectrum in only the top 15 markets in the A and B blocks. The small and rural providers won 500 licenses covering almost 60 percent of MHz/pops available outside the top 15 markets in the A and B blocks.[2] These 500 licenses outside the top 15 markets sold for an average price of only $0.66 per MHz-pop, which is significantly lower than the average price of $1.92 per MHz-pop for all licenses in these blocks. Winners in these smaller and rural markets will provide increased access to broadband and greater choice in wireless service for consumers living in rural areas.

Some have argued we should have provided more smaller geographic areas, as we did in AWS-1. However, the percentage of spectrum available in smaller geographic areas was very comparable. *See Exhibit 9.* The band plan makes nearly half of the spectrum available over smaller and medium-sized geographic areas, about one-third of the spectrum available over larger regional areas, and about one sixth of the spectrum available on a nationwide basis that will be used exclusively as part of a public/partnership with a national public safety licensee. This distribution is very similar to the geographic distribution in the AWS-1 Auction from 2006.

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[1] Coleman Bazelon, The Brattle Group, *Broadcasting and Cable* 4/7/2008.

[2] These providers include all bidders with fewer than one million mobile telephony subscribers, including those with no such subscribers (new entrants).

Moreover, in these largest markets the geographic size of the license did not seem to matter. The nationwide incumbents' need for wireless broadband spectrum in major markets drove them to bid substantial amounts for even the smallest urban licenses in the B block, where they often were bidding only against one another. Unless the Commission had banned the nationwide incumbents - - an idea few advocated - - smaller and rural providers would likely not have succeeded in the largest markets.

A Wireless "Third Pipe"

Significantly, because this spectrum is well-suited for the provision of wireless broadband, the auction represents a critical opportunity to continue deploying wireless broadband services. All Americans should enjoy the benefits of broadband competition – availability, high speeds and low prices. In much of the country, consumers have a choice of only two broadband services: cable or DSL. Wireless service is fast becoming critically important as another platform to provide broadband. Last summer, I testified that one of the most important steps we could take to provide affordable broadband to all Americans is to facilitate the deployment of a third "pipe" into the home.

Although the Commission adopted a plan urged by a coalition supporting a new national wireless broadband alternative (*i.e.*, 11 MHz paired, large geographic areas and combinatorial bidding) the auction did not result in a single, nationwide new entrant. While it might have been better if a new nationwide provider had emerged, that does not mean that this auction did not ensure that a third provider will be able to use a wireless broadband platform to compete against the incumbent telephone and cable companies. For example, Verizon, which is not the incumbent DSL or cable provider in Chicago, won licenses in that area. As a result of the auction then, Verizon will be able to provide a more robust wireless broadband service to compete with the incumbent telephone and cable companies. The same can be said of Metro PCS winning licenses in Boston and AT&T winning licenses in New York City. In those areas these companies will be providing an alternative wireless broadband service in competition with the broadband services currently provided by the incumbent telephone and cable companies.[3]

A bidder other than the incumbent DSL or cable provider won a 700 MHz spectrum license in the paired A, B, or C blocks in nearly every area in the country. *See Exhibit 10.* In most areas, these non-wired bidders include rural and smaller providers (including new entrants). As a result, we have greatly enhanced the potential for an additional wireless "third-pipe" in nearly every home across the country. In fact, both nationwide incumbents that participated in the 700 MHz auction have announced they will deploy the very latest generation of wireless broadband services using this spectrum, which will operate at speeds competitive with the latest DSL and cable modem services.

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[3] Even where the nationwide incumbents do have wires, any incentives to limit their nationwide wireless networks to protect their regional wired revenues appear to have been outweighed by the need to compete with other wireless providers and the greater nationwide growth opportunities available in the wireless broadband market. For example, even though Verizon has an extensive wired broadband network, Verizon Wireless has historically been the most aggressive nationwide wireless incumbent in rolling out wireless broadband service in *both* Verizon's wired and un-wired territories.

Competitive Impact Going Forward

The impact of this auction on the emerging wireless broadband market cannot be measured in isolation. During my time as Chairman, the Commission has made vast amounts of spectrum available for the next generation of innovative wireless services, including 90 MHz of spectrum in the Advanced Wireless Service and the 62 MHz of spectrum in the 700 MHz band being discussed today. With this additional spectrum, the four nationwide incumbent wireless providers are more equal competitors in terms of spectrum ownership in the top 100 markets. *See Exhibit 11.*

Including Auction 73, AT&T holds an average of 83 MHz of spectrum in the top 100 markets post auction, and Verizon Wireless holds an average of 79 MHz of spectrum in those markets. Although Sprint and T-Mobile did not participate in the 700 MHz auction, they hold significant amounts of spectrum in other bands, including the Broadband Radio Service and Advanced Wireless Services bands. Sprint currently holds an average of 100 MHz of commercial spectrum in the top 100 markets, and T-Mobile holds and average of 48 MHz of spectrum in those markets. Other providers, including rural carriers, new entrants, and small businesses, hold significantly more spectrum in the top 100 markets than any one of the nationwide incumbents alone and hold even more spectrum on average in rural areas.

Solving the Public Safety Interoperability Crisis

Of course, one important issue remains from the previous auction – the lack of a successful bidder for the D Block of spectrum that was a part of the Public Safety/Private Partnership.

While the results of the last auction will help inform our decision with respect to the D Block, our decision must also be informed by the continuing need for a truly nationwide interoperable broadband network for public safety agencies to use during times of emergency. Put simply, during a crisis public safety has to be able to communicate, regardless of where they are from or the uniform they wear.

I remain committed to finding a solution that will facilitate a nationwide interoperable broadband network for public safety. It has been more than six years since brave police and fire fighters ran into the Twin Towers and the Pentagon without an effective emergency communications system. The Public Safety/Private Partnership was intended to ensure that public safety keeps pace with the advances in communications, and gives first responders the interoperable broadband communications capabilities they need to protect the life and property of the American public. The Commission could not have afforded to let the opportunity that the 700 MHz band offers for public safety pass us by.

My Republican and Democratic colleagues all agreed. The Commission unanimously adopted the Public Safety/Private Partnership approach for the D Block as an innovative means to address the critical need for nationwide public safety interoperability. Many national and local public safety organizations also expressed support for a public-private partnership approach as their last, best chance to make this network a reality.

While I and some of my colleagues would have preferred for public safety to have their own funding to build a network, the simple reality is that funding remains a significant challenge with respect to public safety interoperability. The Public/Private Partnership was designed to address this crucial issue, as the only tool reasonably available to the Commission. In the absence of the financial resources for public safety to build out their own network, I believe we should continue to try to explore ways in which we can help facilitate using the D Block as a tool to achieve a nationwide interoperable public safety network.

The Commission will, however, also need to take into account why the D Block did not attract a successful bidder. For example, the Commission needs to consider whether the demands that were being placed on the prospective D Block winner were too great. Were the network expectations reasonable? Was the build-out requirement imposed on the D block winner too ambitious?

I am aware of allegations made with respect to the Public Safety Spectrum Trust and their advisor, and I have asked the Inspector General to look into these claims. We await the results of the Inspector General's investigation, which will inform our actions going forward.

I also believe that we will need to revisit the obligations of the D Block within the partnership, and ensure that there is sufficient certainty in the process. We will need to evaluate ways to restructure the Public Safety/Private Partnership. With respect to the Public Safety Broadband Licensee, we need to be clearer about the role that the public safety licensee will play in the day-to-day operations of the network. For example, I do not believe the Commission envisioned that the Public Safety Broadband Licensee would function as a commercial reseller of the D Block licensee's services, nor did the

Commission envision large-scale network operations being undertaken by the public safety licensee.

I believe that a Public/Private Partnership remains a viable means for achieving a nationwide interoperable broadband public safety network. More importantly, I believe it remains the only tool at the Commission's disposal to solve the public safety interoperability challenge. However, we will look at all options in considering the appropriate path, and look forward to hearing from the members with respect to their views.

Conclusion

This auction stands as the most successful FCC auction ever conducted, but there is still more to be done. We must still find a way to help public safety build a nationwide interoperable broadband network, and we must license the D block so that it can be put to use as soon as possible after the end of the digital television transition. I look forward to working with this Committee and my colleagues on these difficult issues in the months to come.

EXHIBITS

Average Prices per Block in 700 MHz and AWS-1 Auctions

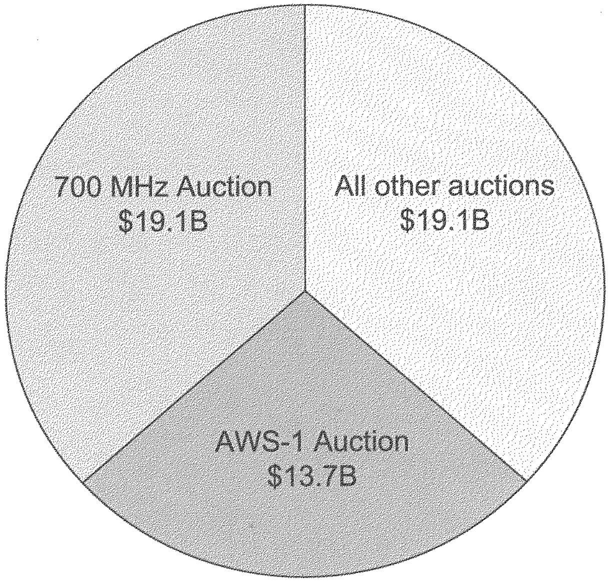
700 MHz Auction Results (Auction 73)					AWS-1 Auction Results (Auction 66)				
700 MHz Block	Geographic Area	Bandwidth (MHz)	Total Provisionally Winning Bids	$'s per MHz-Pop	Comparable AWS-1 Block	Geographic Area	Bandwidth (MHz)	Comparable Total Provisionally Winning Bids	$'s per MHz-Pop
A	EA	12	$3,961,174,000	$1.16	**C**	EA	10	$1,491,238,000	$0.52
B	CMA	12	$9,143,993,000	$2.67	**A**	CMA	20	$2,268,029,200	$0.40
C	REAG	22	$4,748,319,000	$0.76	**F**	REAG	20	$4,174,486,000	$0.73
E	EA	6	$1,266,892,000	$0.74	**C**	EA	10	$1,491,238,000	$0.52
Total			$19,120,378,000	$1.29					

* Calculation of Dollars per MHz-Pop is based on the total population of the block

** All Provisionally-Winning-Bid and Dollars-per-MHz-Pop calculations are in gross dollars

Exhibit 1

Comparison of 700 MHz and AWS-1 Auction Revenues vs. All Others



Note: 700 MHz Auction revenues do not account for bidding credits. (FCC, April 2008)

Exhibit 2

Winning Bidders with Bidding Credits

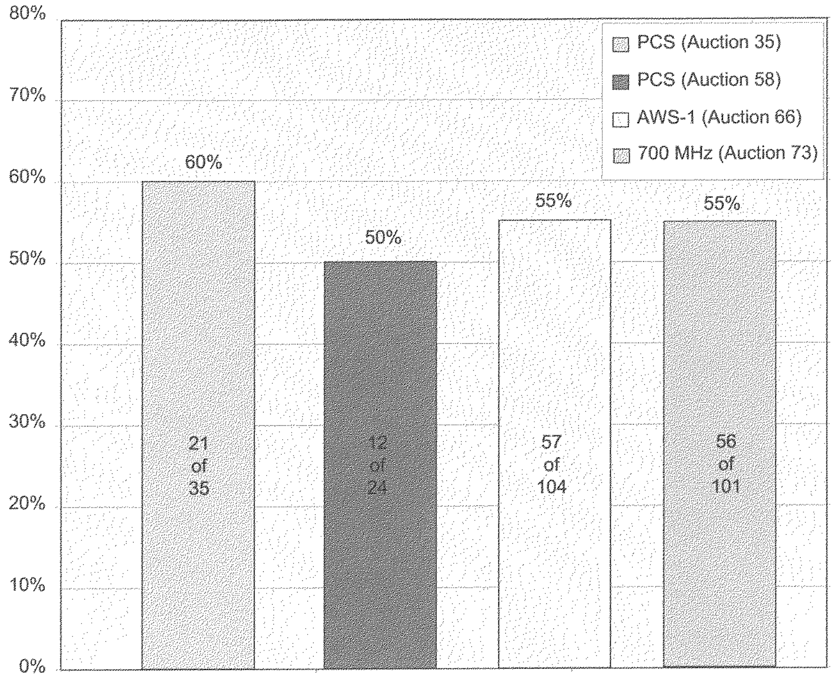


Exhibit 3

Licenses Won with Bidding Credits

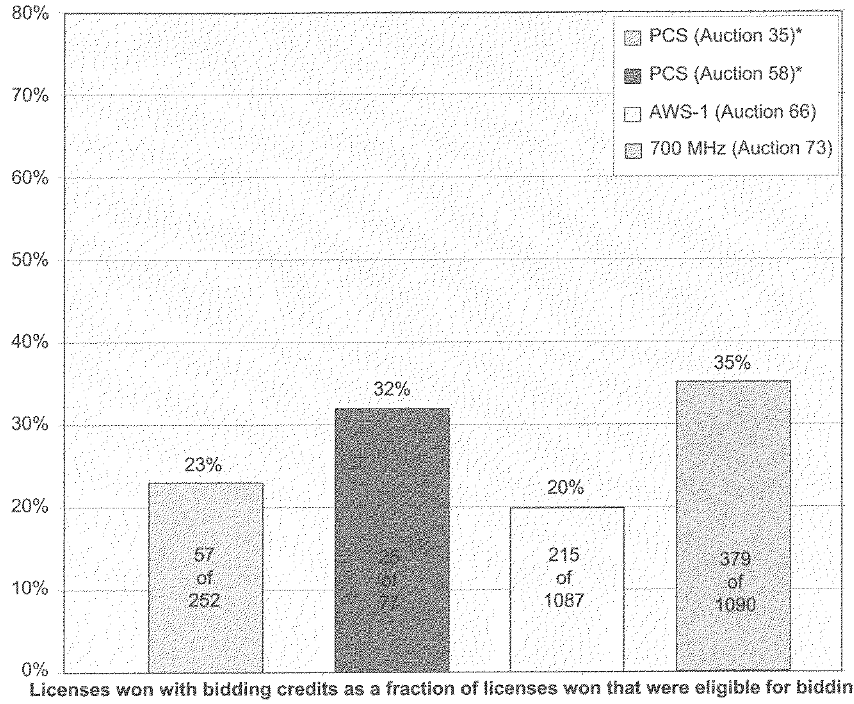
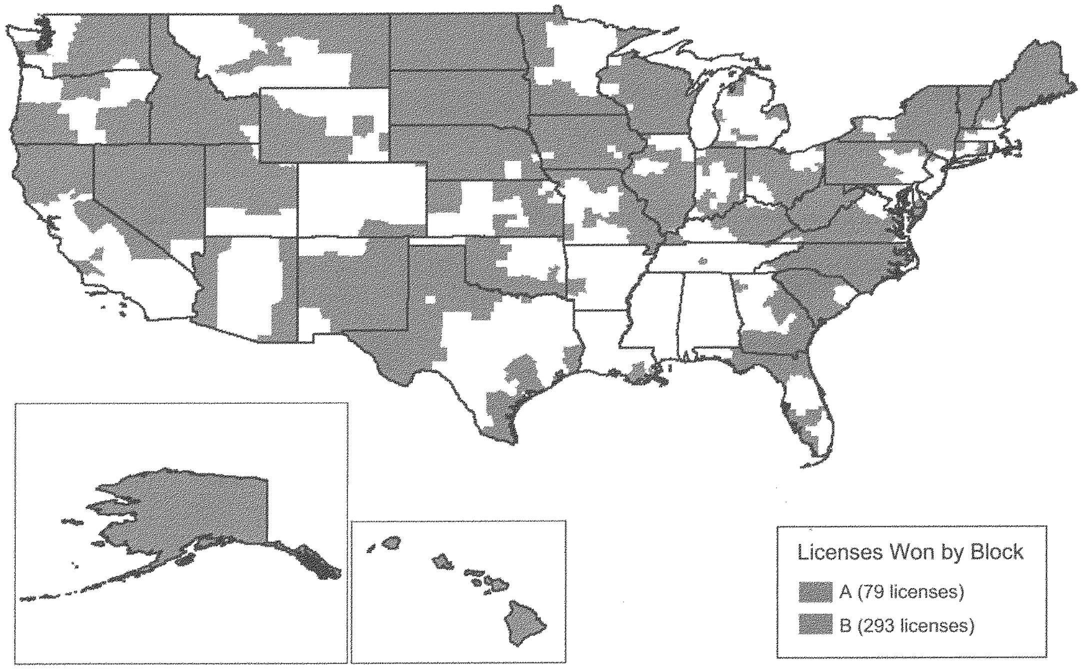


Exhibit 4

*Excluding all designated entities in these auctions that partnered with nationwide incumbent carriers, specifically AT&T, Sprint and T-Mobile or their predecessors. No designated entities partnered with nationwide incumbent carriers in the AWS-1 and 700 MHz auctions.

Licenses Won by Designated Entities



Note: Map includes A and B Block licenses in the 700 MHz Band in the 50 states. (FCC, April 2008)

Exhibit 5

Total Bidding Credit Dollars

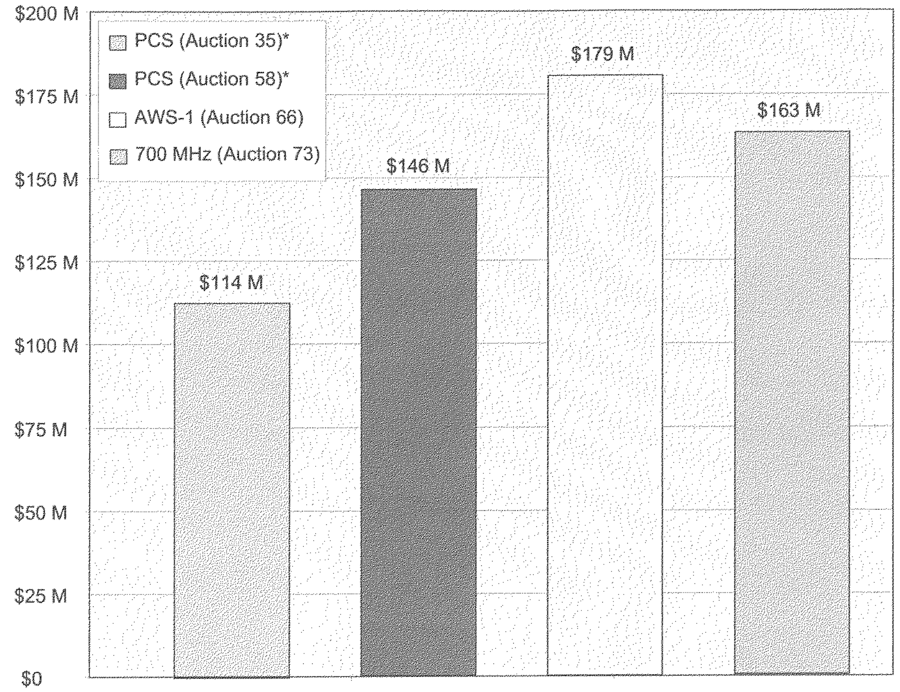


Exhibit 6

*Excluding all designated entities in these auctions that partnered with nationwide incumbent carriers, specifically AT&T, Sprint and T-Mobile or their predecessors. No designated entities partnered with nationwide incumbent carriers in the AWS-1 and 700 MHz auctions.

Licenses Won by New Entrant – Frontier Wireless (Dish Network)

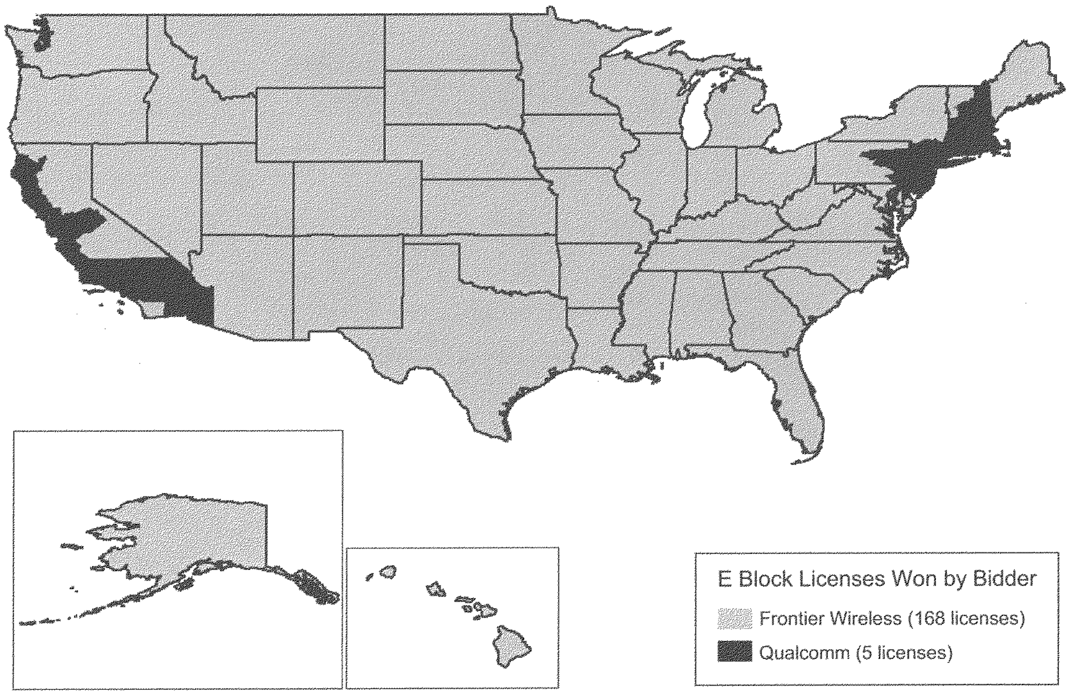
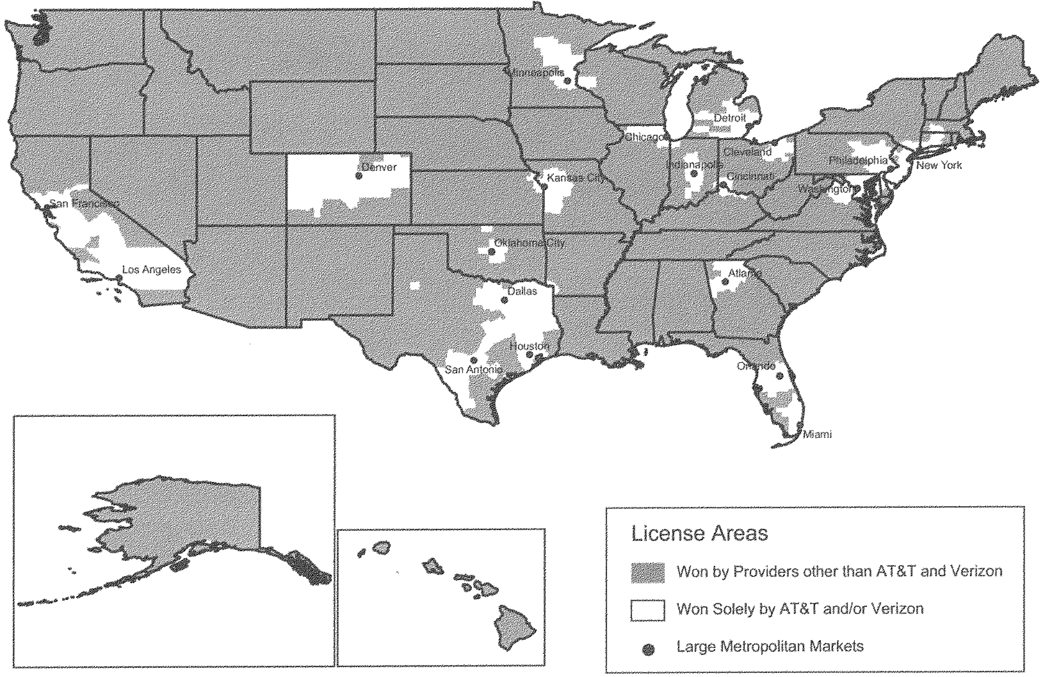

E Block Licenses Won by Bidder
▨ Frontier Wireless (168 licenses)
■ Qualcomm (5 licenses)

Exhibit 7

Note: Map shows E Block licenses in the 700 MHz Band in the 50 states. (FCC, April 2008)

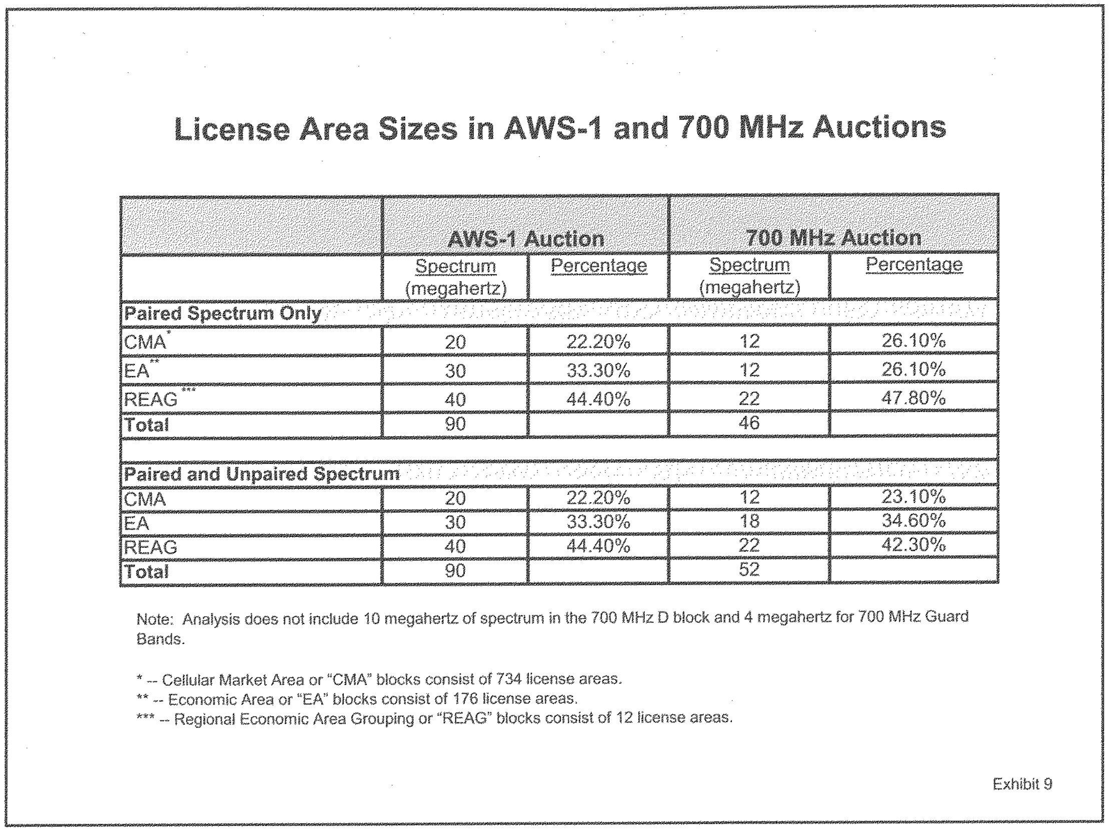
Licenses Won by New Entrants, Small, and Rural Providers

(Excluding AT&T and Verizon Wireless)



Note: Map includes A and B Block licenses in the 700 MHz Band in the 50 states. (FCC, April 2008)

Exhibit 8



License Area Sizes in AWS-1 and 700 MHz Auctions

	AWS-1 Auction		700 MHz Auction	
	Spectrum (megahertz)	Percentage	Spectrum (megahertz)	Percentage
Paired Spectrum Only				
CMA[*]	20	22.20%	12	26.10%
EA[**]	30	33.30%	12	26.10%
REAG[***]	40	44.40%	22	47.80%
Total	90		46	
Paired and Unpaired Spectrum				
CMA	20	22.20%	12	23.10%
EA	30	33.30%	18	34.60%
REAG	40	44.40%	22	42.30%
Total	90		52	

Note: Analysis does not include 10 megahertz of spectrum in the 700 MHz D block and 4 megahertz for 700 MHz Guard Bands.

* -- Cellular Market Area or "CMA" blocks consist of 734 license areas.
** -- Economic Area or "EA" blocks consist of 176 license areas.
*** -- Regional Economic Area Grouping or "REAG" blocks consist of 12 license areas.

Exhibit 9

Licenses Won by Providers Other Than Incumbent Telephone or Cable Company

700 MHz Spectrum for Wireless "Third Pipe"

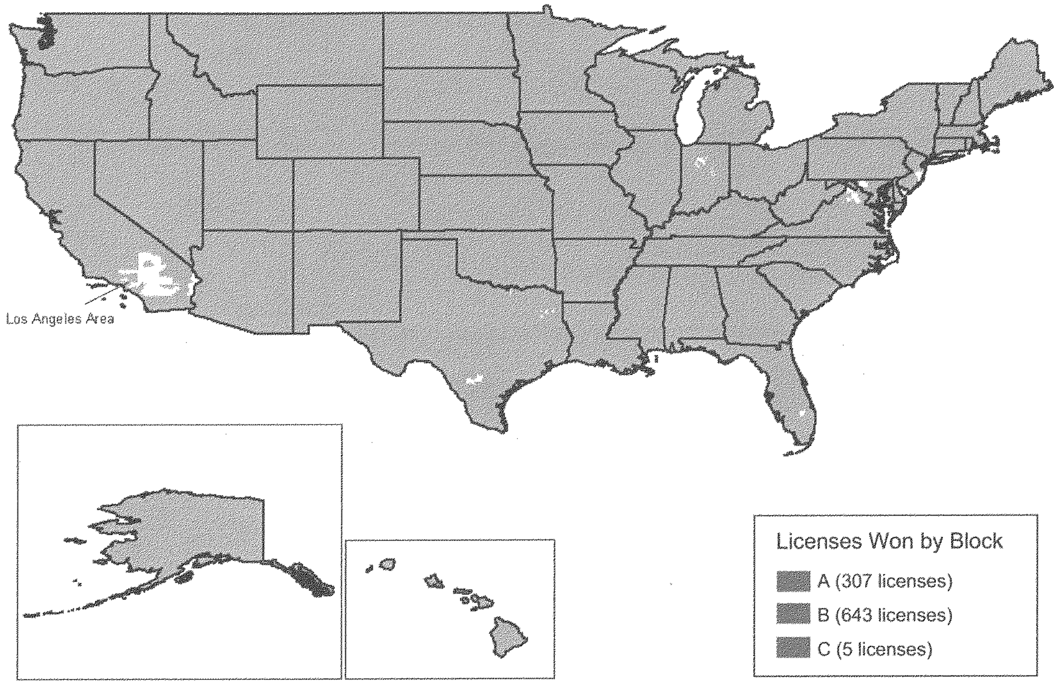
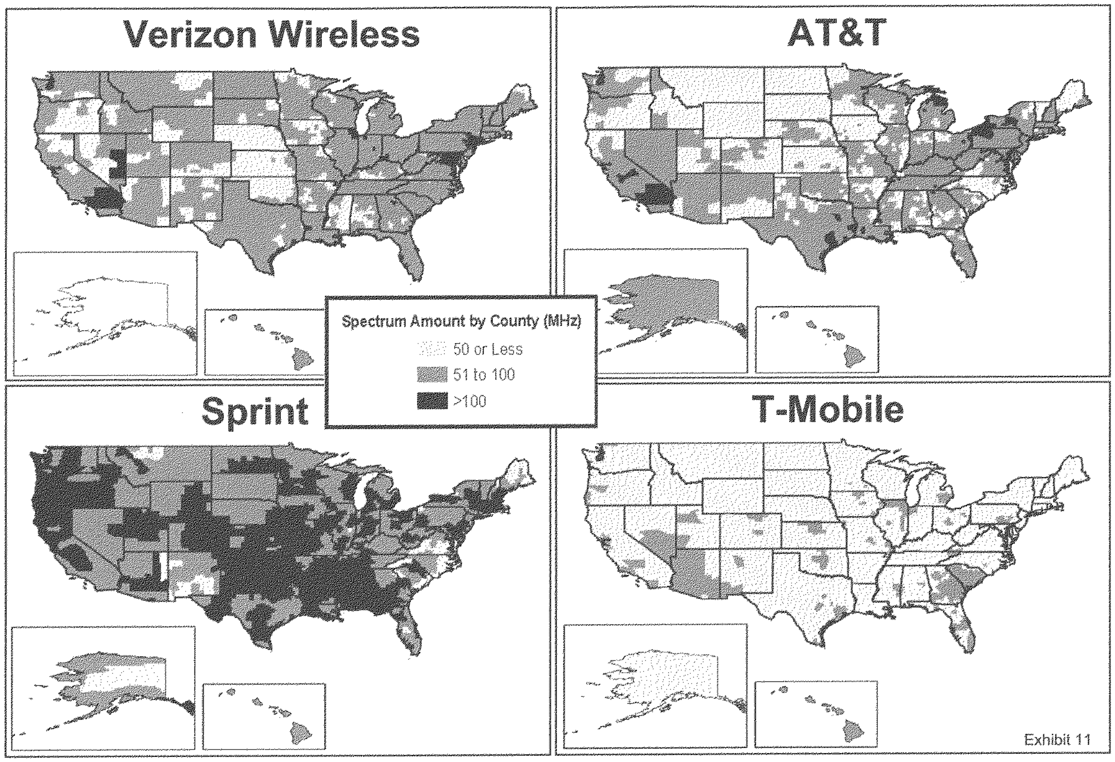


Exhibit 10

Note: Map includes 700 MHz A, B, and Upper C Block licenses in the 50 states won by bidders in areas without wired networks. (FCC, April 2008)

Nationwide Incumbent Spectrum Holdings After 700 MHz Auction



Note: Maps include spectrum in the Cellular, Broadband PCS, ESMR, AWS, BRS, and 700 MHz Bands. (FCC, April 2008)

Mr. MARKEY. Thank you, Mr. Chairman, very much.

And now we will turn to Commissioner Michael Copps, the senior Democrat on the Federal Communications Commission. Welcome back, Mr. Copps. Whenever you are ready, please begin.

STATEMENT OF MICHAEL J. COPPS, COMMISSIONER, FEDERAL COMMUNICATIONS COMMISSION

Mr. COPPS. Thank you, Mr. Chairman, Ranking Members Barton and Stearns, all the members of the committee. Thank you for holding this hearing.

My time is short so I will focus on what is far and away my top priority for the 700 MHz proceeding, public safety. It is top priority for the country too, and the bad news is that America's heroic first responders still don't have the communications tools they need to protect themselves and protect us. I still favor trying to make a public-private partnership work. I have never said it was the ideal way to go. In fact, as some of you may recall, I have long believed that a federally-funded interoperable wireless network dedicated exclusively to public safety use would have been the right solution. If the previous Commission in those anxious days following 9/11 had dedicated itself to working with the Congress towards this end, we might actually have made it happen, but that was then, this is now, and different realities prevail.

So last summer I accepted the novel idea of public-private spectrum partnership because it likely represents our last best hope to build a workable public safety network combining the technical sophistication of a commercial operator with the ubiquitous coverage, robustness, redundancy and interoperability that this network must have. Leaving jurisdiction to do its own thing just isn't enough when we are talking about large-scale natural disasters and the ever-present threat of terrorist attacks. The network I envision must work not only for public safety but also for the commercial partner, providing it with a reasonable rate of return and long-term profitability. There is work to be done here. But we also have to guard against the design and operation of this network being hijacked for purely commercial purposes, and let me be very blunt: we need to know upfront who among the potential bidders in a new auction is dedicated to making this model work. There are those who have the power to derail this whole effort, and we are not going to get another chance after the next auction.

To make this all happen, we need an honest broker between public safety and the commercial interest. I devoted much of my last year to make the FCC that honest broker. I pushed hard at every turn to get the FCC oversight authority over network negotiations as well as the final say in approving, modifying and enforcing any agreement that the parties eventually reached. I know that this would not be an easy role, of course, but given the stakes, it was an essential one and I say again today, if this effort is going to really work, we all need to understand how involved and proactive the Commission will have to be. Our role must be more than just reviewing a final agreement. It is clear now that we need to be active up front in the process as well. If we can't deliver on what I am talking about, we shouldn't even be proceeding down this road. So allow me very quickly to identify five principles that I believe can lead us to a better outcome this time around. I mention them briefly, and my written statement provides elaboration.

First, we must resolve as many technical details as possible about the network before we begin the auction. Last time we were operating on a short timeframe with a drop-dead date for conducting the auction staring us in the face. Many details were left to negotiation between the parties after the auction closed and the FCC was to render its judgments after that. This time we need at least 90 percent of that network sharing agreement worked out in advance of the auction. If we put enough blood, sweat and toil into it now, we can avoid the tears of a failed effort.

Second, we need to clarify the roles and the rules of public safety and the commercial licensee, again, before the auction. While this should be a nonprofit operation for public safety, we should not preclude the public safety licensee from hiring experts including those who charge market rates. I want public safety to have the Nation's best experts on tap as soon as possible, people who know how to build and operate cellular networks, who understand clearly how much it costs to do so and who can give independent, unbiased advice about public safety's needs. One avenue for resolving these issues may be for the public safety representative to receive some modest funding from Congress or from one of the federal agencies that currently funds interoperability projects. It wouldn't have to be a large amount, just enough to support planning and some operational expenses as the effort gets launched.

Third, the FCC needs to make sure that it has the expertise it needs to contribute network and technical knowledge to this effort. We need to assess whether we have that expertise in-house today. If not, we either need to contract for experts or convene technical advisory panels.

Fourth, the FCC needs to perform or otherwise obtain a careful economic analysis, the same kind of analysis that a business would perform before building a multibillion-dollar network. This auction is unlike other FCC auctions. Ordinarily there is no question that the spectrum will say. While conditions can affect total revenue, there are takers usually at some price. If we put forth rules or create too much uncertainty or don't allow a reasonable expectation for profit, we will again find that no entity is willing to bid.

Fifth, when the FCC has done the hard work of formulating a set of network and operational specifications, we need to put them out for public comment. All this is a tall order, I realize, and there are those who will say, well, better to just make a few tweaks and get on with the auction, but for me the time for small tweaks has passed. Sure, we can change the reserve price, which I opposed in the first place, and we can tweak the default penalty, but that alone won't give us what we need to do.

Each of my colleagues wants to deliver for public safety. I commend them and I command Chairman Martin for the thoughtful and receptive approach he has brought to this matter and I look forward to working with him, my colleagues, with all the parties and with this committee to finally build America's brave first responders the networks they deserve.

My comments on the commercial side of the auction are in my written testimony. I view the outcome as decidedly mixed. A lot of money was raised, far surpassing expectations, but we did not see as many smaller bidders as I hoped nor did we get a nationwide new entrant. In retrospect, it is clear that imposing a wholesale obligation on the C block would have cost minimum revenue to the Treasury and would likely have produced a new entrant. That would have been a good news story for American innovators, including especially women and minority entrepreneurs who would have had a way into the wireless market without the need to raise staggering sums of capital. The consolidation we see in the auction results with the two largest wireless companies in the country winning 85 percent of the licenses by value also underscores the huge mistake this Commission made when it eliminated spectrum caps. We are coming dangerously close to foreclosing competition in the wireless marketplace, which is bad news for consumers and innovators alike.

Thank you for the opportunity to testify today. I look forward to your comments and guidance and questions, and in the spirit of Charles Dickens cited by the chairman, God bless us all, everyone.

[The prepared statement of Mr. Copps follows:]

STATEMENT OF MICHAEL J. COPPS

Good morning Chairman Dingell, Chairman Markey, Ranking Members Barton and Stearns and Members of the Committee and thank you for holding this hearing.

Auction 73 brought us both good news and bad, but on the most important score-providing for the public safety—the news is still out and the really hard work is just beginning. We are still nowhere near improving the sad state of communications infrastructure available to America's heroic first responders. And remember this: public safety was a primary, and in some minds the hands-down most important reason, that we reclaimed TV channels 52 through 69 in the first place. So there is no more important mission for the FCC in 2008 and beyond than finishing this job and doing it right.

Even after the bumpy auction ride of the past year, I still favor trying to make a public-private partnership work. I've never said it was the ideal way to go. In fact, as some of you may recall, I have long believed that a federally-funded, interoperable wireless network-dedicated exclusively to public safety use-would have been the right solution. If the previous Commission, in those anxious days following 9/11, had stepped forward for such a commitment and dedicated itself to working with the Congress, we might have actually made this dream a reality. But that was then and this is now and different realities prevail.

So last summer, I accepted the novel idea of a public-private spectrum partnership because it probably represents the last, best chance we have to build a network that will work for public safety. A viable partnership would combine the technical sophistication of a commercial network with the demanding coverage and reliability that public safety must have in order to provide the Nation's first responders, at long last, with access to a national, interoperable broadband network. The most important part of this decision, in retrospect, is that for the first time the FCC recognized that we can no longer just assign public safety licenses to states and localities, full stop, end of FCC involvement. Responding to regional and national disasters and coping with the threat of terror require much more than every jurisdiction just doing its own thing. Report after report has documented that such an approach has left too many licensees without the ability to achieve interoperability and without the funds to build out even local networks. Put more bluntly, we have left them without the tools they need to protect us and to protect themselves. Seven years after 9/11, this is a profoundly unacceptable result.

As we considered the details of the public-private model, my number one concern was that the network actually work for public safety. In terms of ubiquity, robustness, redundancy and many other qualities, the public safety network is a different animal than the purely commercial model. If we cannot ensure these attributes, we shouldn't even be proceeding down this road. As I have said before, I would rather have no network built-and let public safety go back to the drawing board-than tie up first responders' spectrum in a network primarily or disproportionately dedicated to serving purely commercial interests. We simply cannot let this precious opportunity to serve public safety be derailed by those who may prefer to enrich private interests at the expense of the public well-being. Let me be more blunt: we need to know up-front who among potential bidders in a new auction is dedicated to making this model work because there are those who have the power to derail the whole effort, and we're not going to get another chance after the next outing.

At the same time, I also recognized that this network had to provide the commercial partner with a reasonable rate of return and an expectation of long-term profitability-or else the whole arrangement would collapse, leaving public safety without a network. Clarity about this is still lacking. Finally, and just as importantly, I believed the partnership required an honest broker between public safety and the commercial interest. And I devoted much of my effort last year to make that honest broker the FCC. I pushed hard, at every turn, to give the FCC oversight authority over network negotiations as well as the final say in approving, modifying and enforcing any agreement that the parties eventually reached. I knew that this would not be an easy role, of course; but given the stakes, it was an essential one. And I say again today: if this effort is going to really work, we all need to understand how involved and proactive the Commission must be. I believe we made substantial progress in carving out that role before the auction. But then we did so prospectively. This time the FCC needs to assume that more active role up-front in the process.

So as we embark on this critically important work, I'd like to identify five principles that I believe can lead us to a better outcome this time around:

First, we need to resolve as many technical details as possible about the network before we begin the auction. Last time we were operating on a short time-frame with a drop-dead date for conducting the auction staring us in the face. Many details were left to negotiation between the parties after the auction closed. Our rules specified, as you know, that the Commission would thoroughly review whatever the parties agreed upon to ensure it was viable, efficacious and squarely in the public interest. But now—although time is precious and the urgency still high—we can do it smarter. Our agency must roll up its sleeves this spring and summer, bring the parties together, and work with them to make sure the expertise is available, the untold minutia of how to build and operate a nationwide wireless network is mastered, and everyone knows where this is going before the bidding opens. To me, this means that at least 90% of the network sharing agreement must be worked out in advance of the auction. If we put enough blood, sweat and toil into it now, we can yet avoid the tears of a failed effort.

Second, we need to clarify the roles of each of the partners—public safety and the commercial licensee—again before we hold the auction. This means specifying the precise duties and responsibilities of the public safety licensee and how it will fund itself in the period before the network is built, as well as on a long-term basis. Of particular importance, we must ensure that this is, at its heart, a non-profit operation. But that should not preclude the public safety licensee from hiring experts, including those who charge market rates for their services. Indeed, I think it is essential that public safety get the nation's best experts on its staff as soon as possible-people who know how to build and operate cellular networks, who understand clearly how much it costs to do so, and who can give independent, unbiased advice on what kinds of equipment and specifications will serve public safety's needs. Drawing the line between that kind of legitimate and necessary budgeting and allowing someone to profit unduly by advising public safety is one of our larger challenges in the months ahead.

One avenue for resolving these issues may be for the public safety representative to receive some modest funding from Congress or from one of the federal agencies that currently funds interoperability projects—it would not have to be a large amount, just enough to support planning and some operational expenses until the effort becomes self-sustaining.

Third, the FCC needs to make sure that it has, in-building or via contract, the expertise it needs to contribute network, technical and operational knowledge to this effort and to play its honest broker role. We need people who understand how to build cellular networks and how much it costs to do so. For example, as we decide the geographic coverage requirements for the new network, we need to know what the cost difference is for building out to 90 percent versus 99 or 99.3 percent of the Nation's population. We need to understand the costs and benefits, in sparsely-populated areas especially, of supplementing terrestrial build-out with satellite technology. There are hundreds of highly technical questions, I recognize, but we cannot write rules that strike the right balance if we are not fluent in these details.

So my message is that we need the experts. If we don't have enough experts today, we need to contract for them or to impanel a technical advisory group. If we can't get our hands on this kind of advice, then the FCC has no business even attempting to write rules for this auction.

Fourth, the FCC needs to perform, or otherwise obtain, a careful economic analysis—the same kind of analysis that a large carrier would perform before building a multi-billion dollar network or an investor would perform before loaning money to a new venture. After all, this auction is unlike other auctions we hold here at the FCC. Ordinarily, there is no question that spectrum will sell. To be sure, the conditions we impose can affect total revenue, but there will be takers at some price. But here we are offering the chance to participate in a public-private partnership that has substantial costs as well as benefits. If we put forth rules that create too much uncertainty, or don't allow a reasonable expectation of profit, then we will find that no entity is willing to bid. As all of us in this room are well aware, this is not a purely academic concern—it's what happened last time. So we need to do better this time.

Fifth, when the FCC has done the hard work of formulating a set of network and operational specifications, we need to put them out for public comment. We can't afford to learn too late that one or another provision would unnecessarily exclude an otherwise willing bidder. And we can't afford to learn that any of our network specifications won't work for public safety or that we have left ambiguity in our rules that could cause harmful uncertainty.

All this is a tall order, I realize. And there are those who will say to us, "Better just to make a few tweaks in what you did last time and get on with the next auction." But, for me, the time for small tweaks has passed. Sure, we can change the reserve price (which I opposed in the first place), and we can even tweak the default penalty provision (though there needs to be some incentive for the auction winner to negotiate in good faith). But I don't believe that will give us the data and the understanding we need to achieve better results in the months ahead. We have a new situation now, and a new opportunity to do this right.

Each of my colleagues wants to deliver for public safety. I commend them, and I commend Chairman Martin for the thoughtful and receptive approach he has brought to this matter. I look forward to working with them, with all the parties, and with this Committee to finally build America's brave first responders the network they deserve and to provide our citizens with the public safety networks they expect.

* * *

Let me turn very briefly to the commercial side of the recently-completed 700 MHz auction. Here the news is decidedly mixed. On the positive side, a lot of money, far exceeding most expectations, was raised-and this was smack in the middle of some tough economic times. Also on the positive side, we now have enforceable open access requirements on the 22 MHz C-Block and a commitment by the Commission to resolve complaints within six months. As I have stated before, history makes clear that open networks are good for consumers and for businesses. Without openness requirements, we would never have the fax machine, the answering machine, or the explosion of dial-up services like AOL that introduced most Americans to the Internet.

But in important respects, as I warned when we launched our rules, we end up with the same old, same old. The Nation's two largest wireless carriers—who are also the Nation's two leading wireline voice and DSL providers—won roughly 85% of the licenses, as measured by value. Participation by rural telephone companies was disappointing; participation by women- and minority-owned businesses was appalling. These trends towards consolidation in the wireless marketplace should worry all of us. Combined with the additional cross-ownership of wireless and wireline assets-which raises serious concerns that the wireless data market might develop in ways that are not good for American consumers—I find them deeply disturbing. To me, these facts underscore the damage that the Commission's decision to eliminate spectrum caps has wrought. I think our friends to the north have the better idea—Canada will auction 105 MHz of AWS spectrum next month-with 40% reserved exclusively for new entrants! I wish we had followed their model in our own auction.

The auction results also deepen my disappointment that the Commission did not impose a wholesale requirement on the C-Block. It is now clear that that a wholesale requirement would have had minimal impact on overall auction revenue, yet would have brought a new entrant to the wireless marketplace. This new entrant would have introduced welcome new competition. Even more importantly, unlike existing carriers, it would have been legally obligated to provide spectrum to small entrepreneurs at wholesale rates. Imagine what a change that would be—if any inventor with a great new technology, or any entrepreneur who identifies an underserved market, could simply buy spectrum capacity from a nationwide carrier at wholesale rates and offer its product directly to consumers. This would also have been a tremendous step forward for women- and minority-owned businesses eager to get into the wireless market but without the staggering capital resources necessary to build a new network from scratch. What a huge force for innovation and openness in the wireless market this could have been-and I am very sorry that a majority of the Commission rejected the suggestion of high-tech innovators, public interest groups, Commissioner Adelstein and me to travel down that road.

Thank you for the opportunity to testify today and I look forward to your comments, guidance and questions.

Mr. MARKEY. I thank the gentleman very much.

And now we will turn to Commissioner Deborah Tate to hear her opening statement.

STATEMENT OF DEBORAH TAYLOR TATE, COMMISSIONER, FEDERAL COMMUNICATIONS COMMISSION

Ms. TATE. Thank you. Good morning, Chairman Markey, Ranking Member Stearns, and Mr. Barton and distinguished members of the Committee. Thank you truly for the opportunity for all of us to be here today to have this dialog. I agree that this must be and is our number one priority today and going forward.

Auction 73 raised almost $19 billion, as you all have heard, I won't go through all the specifics, given that it is tax day. This was a huge financial success, especially as we consider what was going on with all the financial uncertainty both on Wall Street and on Main Street.

Further, the auction was a success from a technical perspective, which we often overlook. The innovative auction software that the FCC employed worked flawlessly. We applied anonymous bidding rules for all participants to limit collusion and prevent anti-competitive outcomes. Our auction team handled over 261 rounds, applied hundreds of pages of rules fairly and performed its duties well. Indeed, we can all be proud of the Commission's auction, our staff, the procedures and capabilities, which have served as a template for officials and experts to implement auctions in countries across the world.

In addition, as you all have heard, a bidder other than a nationwide mobile service provider won a license in every market. Also, U.S. Cellular, the Nation's sixth-largest mobile provider, with 6 million subscribers, won 152 licenses in 26 States where it provides services. This is clear evidence that regional carriers are also providing competition. We also helped, as you heard from the chairman, small businesses by applying our DE rules to the auction portion with good results. More than half of the winning bidders claimed DE status. In short, the Commission did make efforts to ensure that small and regional providers could not only participate but many of them did so successfully.

I also want to stress other significant benefits, in particular, the potential for exciting new players and entirely new business models. For example, Cox Communications, as you all know, is the third-largest cable company and it won licenses in all 35 of its markets and across 18 States. Cox currently offers video, Internet and wireline and now will be able to offer what more and more of our consumers want: mobility and the long-sought-after quadruple play. We see another exciting possibility, of course, with DISH Network that you heard. The spectrum acquired by DISH might be ideal for mobile broadband or mobile video or other uses. So there is much promise from this auction for further innovation across many other platforms in this dynamic wireless market.

While some commenters sought full, open access in the 700 MHz band, the Commission did take a more measured approach. We limited this to a single block, the C block, and we didn't apply it to any existing or already licensed spectrum.

However, the potential for networks that are even more open is obviously occurring daily. We don't have to wait for services necessarily in this block so perhaps our success shouldn't be block by block but rather in the overall impact that we have had so that consumers can move from device to device, market to market. Having just returned from CTIA, I can attest to the explosive growth in these devices and applications providing mobile broadband in an increasingly open environment.

Certainly the key issue at the FCC and in today's hearing is the D block and the spectrum that we set aside for a commercial licensee to build and operate an interoperable network that would support our public safety users, many of whom are here today, and I know we salute them for their service. We know that unfortunately, as many of you have noted, years later we still lack a truly interoperable network, much less a broadband one. Advanced technology brings real opportunities to assist our law enforcement, firefighters and emergency medical personnel with critical information, whether they arrive at a hostage scene, rush into a burning building or share real-time information across governmental entities and across jurisdictions. Our citizens indeed deserve these life-saving benefits, especially when we know the technologies are already available.

To that end, with input from you all, from other members of Congress, from public safety and industry, last year we did establish a unique set of rules to require this licensee to partner with and service public safety. Our rules allow public safety a significant degree of control over the partnership. Unfortunately, no bidder met the reserve price, something obviously we need your input on. As a result, we now have the opportunity to return to this critical issue, knowing what we know now and learning from this experience. The good news is that we all share the same goal as we move forward. Since the close of the quiet period, like my colleagues, I have met with representatives from all these groups to get their perspectives.

I welcome the opportunity to have this dialog today to hear your perspectives and hope we will be able to set in motion the appropriate rules to successfully complete this mission. To that end, I hope we do not limit this to the review and the confines of just the D block and our previous rules but that we do welcome all types of new creativity, entrepreneurship, and plain old American ingenuity. The spectrum is indeed an American natural resource. We must enlist our brightest minds to maximize its use, harness its scientific attributes and its real-world promise to connect our first responders and every American citizen in a time of crisis.

Thank you.

[The prepared statement of Ms. Tate follows:]

STATEMENT OF DEBORAH TAYLOR TATE

Good morning Chairman Markey, Ranking Member Stearns, and distinguished members of the Committee. Thank you for the opportunity to be here with you today. I have a brief opening statement and then I look forward to answering any questions you may have.

To effectuate the DTV transition mandated by Congress, the Federal Communications Commission will transition 108 megahertz of spectrum in the 700 MHz band from broadcasting to other uses, including new and exciting commercial services as well as critical public safety services. Recently, the Commission held an auction for 62 megahertz of this spectrum in the 700 MHz band. Auction 73, as it is known, met with historic success, as well as some disappointment regarding the D block.

Auction 73 raised almost $19 billion in net winning bids. Given that the congressional Budget Office estimated auction receipts of $10 billion to perhaps as much as $15 billion, the auction was clearly a financial success, especially considering the current climate of extreme financial uncertainty on Wall Street and Main Street.

Further, the auction was a success from a technical perspective. The auction software worked flawlessly. The Commission also applied anonymous bidding rules for all of the participants in Auction 73 to limit collusion between bidders and thus prevent anti-competitive outcomes. Our auctions team handled over 261 rounds, applied the Commission's rules fairly and performed its duties well. Indeed, we can all be proud of the Commission's auctions procedures and capabilities, which have served as a template for officials and experts from all over the world.

In addition, a bidder other than a nationwide mobile service provider won a license in every market. Also, U.S. Cellular, the nation's sixth-largest mobile telephony provider with 6 million subscribers, won 152 licenses in all 26 states in which it provides service. This is strong evidence that regional carriers are providing strong competition. We also helped small businesses by applying our designated entity (DE) rules to the auctioned portions of the 700 MHz band, and with good results. In Auction 73, more than half of the winning bidders claimed DE status. In short, the Commission made efforts to ensure that small and regional service providers could participate in this auction, and many of them did so successfully.

I also want to stress other significant benefits of this auction—in particular, the potential for exciting new players and entirely new business models to be part of our wireless future. For example, Cox Communications, the nation's third- largest cable company, won licenses in Auction 73 and the AWS auction that will give it coverage in all 35 of its markets in 18 states. Cox—which currently offers video, Internet, and wireline phone service—now will be able to offer what more and more customers want: mobility, the long sought-after quadruple play. We see another exciting possibility with the purchase of many licenses by a satellite service provider, DISH Network. The spectrum acquired by DISH Network might be ideal for mobile broadband, or mobile video, or other uses. The auction results thus show great promise for increased competition between not only traditional telecommunications providers but further innovation across many platforms in this dynamic, expansive wireless market.

While some commenters sought full open access in the 700 MHz band, the Commission took a more measured approach. Specifically we limited this rule to a single block, the 700 MHz C block, and did not apply it to any other blocks or to any existing, already licensed spectrum in which providers had already invested in deploying networks. We also limited this rule to devices and applications.

However, the potential for networks that are even more open is already occurring today. We don't have to wait for services in this particular block, so perhaps our success should not be viewed block by block, but rather in the overall impact we have had so that consumers can move from device to device, market to market. Having just returned from the CTIA 2008 wireless show, I can attest to the explosive growth in devices and applications that provide mobile video and mobile broadband in an increasingly open environment.

Certainly a key issue of concern in today's hearing is the 700 MHz D block, spectrum that the Commission set aside for a commercial licensee to build and operate a nationwide, interoperable broadband network that would support public safety users. As members of this Committee know, our public safety community unfortunately still lacks a truly interoperable nationwide communications network, much less a broadband one. Advanced technology brings real opportunities to assist law enforcement, fire fighters, and emergency medical personnel with critical information as they arrive at a hostage scene, rush into a burning building, or share real-time information with teams from different governmental entities in different jurisdictions. Our citizens deserve such life-saving benefits, especially when these technologies are already available today.

To that end, with input from Congress, from the public safety community, and from industry, last year the Commission established a unique set of rules to require a commercial licensee in the D block to partner with and serve public safety. Our rules allowed public safety a significant degree of control over what that partnership would entail and how the network would function. Unfortunately, no bidder met the reserve price for this spectrum block in Auction 73. As a result, we have an opportunity to return to this critical issue, knowing what we know now, and learn from this experience. The good news is that we all share the same goal of true interoperability and providing our public safety agencies with the next-generation technology and safe and secure networks to support them, whether responding to one citizen or protecting our homeland. Since the close of the quiet period for Auction 73, I have met with representatives from public safety as well as industry to get their perspective. I welcome the opportunity to have this dialogue today to get your perspective and hope that we will be able to set in motion the appropriate rules to successfully complete our mission in the most timely, efficient and effective manner possible.

Again, I appreciate your invitation to be here with you today. I am pleased to answer any questions you may have.

SUMMARY

Auction 73 raised almost $19 billion in net winning bids, well above expectations. The Commission's auctions software performed flawlessly. The Commission also applied anonymous bidding rules for all of the participants in Auction 73 to prevent anti-competitive outcomes.

In adopting rules for the 700 MHz band as a whole, the Commission adopted a variety of sizes of spectrum blocks and geographic license areas, including small and medium-sized areas. The auction results thus show that small and regional service providers won licenses, as well as new potential entrants such as a cable service provider and a satellite service provider.

With regard to the D block, we have an opportunity to return to the issue, knowing what we know now, and learn from this experience so that we can effectuate the goals that Congress and the Commission share regarding public safety. I welcome your input today and as we go forward to address this critical issue.

Mr. MARKEY. Thank you, Commissioner Tate, very much.

Our next witness, welcome back again, is Commissioner Jonathan Adelstein, and we welcome you, sir. Whenever you are ready, please begin.

STATEMENT OF JONATHAN S. ADELSTEIN, COMMISSIONER, FEDERAL COMMUNICATIONS COMMISSION

Mr. ADELSTEIN. Thank you, Mr. Chairman, Congressman Stearns, and members of the subcommittee. I appreciate you having this hearing. It is so important to focus our efforts.

The 700 MHz auction certainly is the most significant spectrum auction to date. As Congresswoman Eshoo said, probably we won't see another like it in our lifetime. I think its results should be measured against its impact on broadband, which is the central infrastructure challenge of our age and the central challenge that we face on public safety, our top priority.

On both fronts, it isn't a myth to say that we did not succeed. Ideally, this auction would have facilitated the emergence of a third broadband channel to provide consumers another competitive broadband choice. Unfortunately, the fear I expressed in July when we adopted this rule came true. We missed a golden opportunity to open that elusive third channel into the home. In the long run, this may be viewed as one of the greatest failings of this auction and a lack of a national broadband policy.

As I previously advocated, a truly open wholesale model could stand as an innovative breeding ground, allowing new and diverse competitors to flourish and facilitating opportunities for small and rural carriers. We could have done more to promote open and free markets by adopting a wholesale model. And it is really appalling that women and minorities were virtually shut out of this monumental auction. Our data shows that women-owned bidders failed to win all but the smallest fraction of licenses. Minority-owned bidders won less than 1 percent of them. We truly fell short of meeting the congressional mandate to expand diversity in the provision of spectrum-based services. It is adding insult to the injury we saw in the GAO report that you had issued on Friday.

I am pleased, though, that the results triggered the open access requirement for the C block. Our decision to include these conditions, although limited to the 22 MHz of spectrum, has directed spectrum policy by creating an open access regime for devices and applications. Consumers in this country are frustrated by the arbitrary limitations that they face. In Europe and Asia, handset portability is only a matter of switching out a sim card, but here in the United States, consumers are still largely constrained to the choices offered by their wireless provider. So this condition means progress for wireless innovators. We are now free to bring multimedia products to market and we are heading to Congresswoman Eshoo's district shortly to hear from some of those application providers at a hearing we are holding in Stanford on Thursday.

It is telling that just a few months after adopting the 700 MHz rules, some of the biggest carriers, Verizon and AT&T, announced plans to voluntarily open their networks, and I applaud those concessions. These are significant outgrowths of the open access condition, and I think they will prove a clear win for consumers. We need to stay on top of the implementation of this open access regime.

Now, some have argued that a different mix of licenses could better support a variety of business plans but the open access provision, the way that we look at it, was tied, in order to get a majority, to the larger spectrum block, which some argued would best address the needs of potential new entrants to provide a nationwide broadband service. Ultimately we struck a compromise, and while we did less than what I proposed, I think the outcome was significant.

With respect to public safety, job number one at the FCC, the failure to sell the D block represents a lost opportunity to come to grips with our country's public safety dilemma that we have been talking about since 9/11, which has gone on for far too long. As we develop a model of a shared commercial and public safety network, I question aspects of our approach, and I did raise the concern that there was no guarantee the structure would nurture a nationwide interoperable broadband public safety system that would be both commercially viable and technically feasible. Though I would have preferred direct Federal funding, it became clear that the public-private partnership was the only option available to us. Although this approach could have succeeded, the rules we ultimately adopted simply didn't reach the appropriate balance to meet the needs of both partners. I advocated changes to the rules including waiving a portion of our designated entity rules to allow a D block winner to wholesale greater than 50 percent of the spectrum. I advocated reducing the additional default payment percentage. But these after-the-fact remedies just weren't enough to woo a successful bidder. A true public-private partnership must meet the needs of both partners if it is going to work. If public safety's needs aren't met, the basic objective isn't met, and if a private partner's needs aren't met, then that partner won't attract the capital they need to build out the public safety system and to meet public safety's objectives.

I think we need to do a top-to-bottom review of what went wrong so we can succeed in the next round, which is absolutely critical. We need to strike a balance that works for all parties if we are going to make this partnership work. This time we should provide upfront, detailed guidance to allow parties to make an educated financial liability assessment. This hearing is certainly a part of that top-to-bottom review. We learn a lot from the witnesses that are going to be in the next panel. We learn a lot from all of you. I think certainly in order to move forward successfully, we need to rely on the input of this subcommittee and all the different parties involved. Only then will we be positioned to provide a clear and proper framework for this re-auction to make sure that it works for public safety and works for the safety of our citizens.

Mr. Chairman, thank you for calling this hearing. I look forward to any questions and comments that members may have.

[The prepared statement of Mr. Adelstein follows:]

TESTIMONY OF
JONATHAN S. ADELSTEIN
COMMISSIONER
FEDERAL COMMUNICATIONS COMMISSION

BEFORE THE
SUBCOMMITTEE ON TELECOMMUNICATIONS AND THE INTERNET
COMMITTEE ON ENERGY AND COMMERCE
UNITED STATES HOUSE OF REPRESENTATIVES
"OVERSIGHT OF THE FEDERAL COMMUNICATIONS COMMISSION - THE 700 MHz AUCTION"

April 15, 2008

Mr. Chairman, Congressman Stearns, and members of the Subcommittee, thank you for calling this hearing to address the outcome of the Commission's most significant spectrum auction to date. The distinguished members of this Subcommittee fully recognize that broadband infrastructure is one of the best tools for promoting communications and the entrepreneurial spirit that we have seen in our time. The results of this auction must be measured with an eye to its impact on broadband, whose deployment is the central infrastructure challenge of this Information Age. Broadband infrastructure, and in particular, ultra-high speed broadband is critical to promote the economic, cultural, and social well-being of our country, particularly for small businesses and entrepreneurs, who drive so much innovation and economic growth. Broadband networks also offer unprecedented opportunities for improving and harmonizing the capabilities of our public safety community.

All of us were keenly aware going into the 700 MHz auction that its outcome would profoundly impact the future role of wireless broadband services, potentially offering needed competition to existing wireline broadband providers, facilitating deployment to rural areas, and creating opportunities for enhanced public safety communications. With such a significant block of spectrum up for auction, there was rightly a great deal of diverging pressures on the Commission to construct a 700 MHz band plan and service rules that would meet a wide-range of interests.

In responding, we could have stuck to what's tried and true. We could have declined to adopt any controversial conditions to open the market. We could have stuck with our traditional substantial service constructions standard. We could have allowed public safety agencies to fend for themselves in trying to develop a long-awaited interoperable network. But because our job is to promote the public interest, the status quo was not an option. We heard from a chorus of voices expressing concern about the lack of broadband competition, and the need to promote advanced services in rural and other underserved areas, and the unmet needs of public safety. We obviously fell short of delivering everything consumers, innovators, public safety and carriers wanted. But we have to some extent accelerated the next generation of wireless broadband services and have begun to change the way U.S. consumers receive their wireless services.

In particular, I'm pleased that the auction results triggered the open access requirements on the C Block, offering consumers a new paradigm that they have longed for and certainly deserve. Our decision to include these conditions, though modest in its application to a 22 MHz swath of spectrum, has redirected our future approach to spectrum policy in allowing for an open access regime for devices and applications. Despite technological advances like Wi-Fi, WiMax and more advance mobile services, consumers have been frustrated by arbitrary limitations on the types of devices and functions they can access. Our approach is leading to benefits for the many consumers who so desperately want the unfettered ability to use any wireless handset and download any application they want on their wireless network. And while some tout the U.S. handset market as competitive and robust, still under 9 percent of wireless devices are unlocked.[1] Indeed, in contrast to the handset market in Europe and Asia where handset portability is only a matter of switching out a SIM card, here in the U.S., while the variety of handsets may be increasing and the market evolving, the consumer is still largely constrained by the handset choices offered by its wireless provider. The open access requirements on the C Block will, without a doubt, improve the consumer experience.

It appears the impact of this singular condition goes beyond those consumers using the C Block spectrum. It also means progress for wireless innovators – application developers, manufacturers, and carriers alike who will now be unleashed to bring new multi-media products to market for use on this and potentially other spectrum. The Internet has been a source of remarkable innovation and an engine for economic growth and productivity. It is critical that we bring the benefits of the Internet to the wireless world. I believe our decision to open the C block spectrum takes us in that direction.

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[1] *See* Letter from Christopher Guttman-McCabe, Vice President, Regulatory Affairs, CTIA – The Wireless Association, to Marlene H. Dortch, Secretary, FCC WT Docket No. 08-27; RM-11361 at 1, 7 (filed March 20, 2008) (noting that of "620 wireless devices" identified by CTIA, "54 handsets are offered on an unlocked basis.")

It's telling that just a few months after adopting the 700 MHz rules and prior to the start of the auction, several carriers announced plans to voluntarily open their networks. We now see industry leaders joining forces to form a broad alliance of leading technology and wireless companies through the Open Handset Alliance. This multinational alliance of technology and mobile industry leaders has developed the first open and comprehensive platform for mobile devices, Android. And in the interest of supporting the developer community and sparking innovation on the Android platform, Google announced the Android Developer Challenge, which will provide $10 million to developers who build mobile applications for Android. This type of innovation and open collaboration can only give consumers a richer, more worthwhile experience than what they have today. We have also seen the two largest carriers following suit. Prior to successfully bidding on the C Block spectrum, Verizon Wireless pledged to provide customers with the option to use, on their nationwide wireless network, wireless devices, software and applications not offered by the company. CEO Lowell McAdam has characterized this move as "the next level of innovation and growth."[2] Similarly, AT&T has indicated that it, too, will allow customers the option to use compatible handsets not offered by the company on its nationwide wireless network. These are significant outgrowths of the open access condition that should prove to be a clear win for consumers. But our job is far from complete. It will be critically important for us to continue to assess the implementation of our open access requirements on the C Block as well as the extent to which open access actually develops on other spectrum. As we move forward, we must do so with cautious optimism.

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[2] *See* http://news.vzw.com/news/2007/11/pr2007-11-27.html, "Verizon Wireless To Introduce 'Any Apps, Any Device' Option For Customers In 2008 - New Open Development Initiative Will Accelerate Innovation and Growth", Released Nov. 27, 2008 (last visited April 14, 2008).

Ideally, this auction would have facilitated the emergence of a "third" broadband channel to provide consumers everywhere the benefits of a competitive, high-quality wireless broadband network. Unfortunately, the fear I expressed at our July open meeting adopting these rules came true: we missed a golden opportunity to open that elusive third channel into the home. This will be viewed in the long-run as one of the greatest failings of this auction and of recent Commission policy. I advocated then and continue to believe that a truly open wholesale model could stand as a breeding ground for innovation, for allowing new and diverse competitors to flourish, and for spurring unparalleled levels of competition into the broadband marketplace. I believe such a model could facilitate opportunities for small and rural carriers as well. While the auction outcome represents progress for consumers in terms of new openness for devices and applications, we should have done more to promote open markets by adopting a wholesale model to attract vigorous competitive alternatives.

It is also appalling that women and minorities were virtually shut out of this monumental auction. Indeed, the data shows that women-owned bidders failed to win any licenses, and minority-owned bidders won less than one percent of licenses (7 of 1,090 licenses, or .64%), despite the fact that women constitute over half the U.S. population and minorities around one-third of the U.S. population. It is unfortunate that we have again failed to counter the legacy of discrimination that has kept women and minorities from owning their fair share of the spectrum. In so doing, we failed to meet the statutory requirement in section 309(j) of the Act to "ensure that small businesses, rural telephone companies and businesses owned by members of minority groups and women are given an opportunity to participate in the provision of spectrum-based services."[3]

It is troubling that we lost an opportunity to provide crucial bidding credits across the entire 700 MHz spectrum to designated entities that wholesale fully built-out network services. The bidding credits made available through our designated entity program can be a potent means of getting spectrum into the hands of small businesses and entrepreneurs. I think it is essential that we revisit our policies in this respect to ensure that all bidders have opportunities to bid, particularly where wholesale service is a compelling option for new and diverse providers.

As we look at the results of the auction and its structure, some have argued that a more flexible band plan which included a mix of licenses could better support a variety of business plans. On the other hand, it was apparent that a larger spectrum block could best address the needs of potential new entrants, who expressed interest in providing a nationwide wireless broadband service. Ultimately we had to strike a compromise – and while the measures we took were less than what I would have proposed, they were significant.

It is widely recognized that the tragic failure to sell the D block represented a lost or at best delayed opportunity to come to grips with our country's public safety dilemma. Policymakers all agree that our first responders need the best technology and communications network possible. Many of our nation's public safety agencies already suffer from antiquated systems and struggle to keep pace with new technological opportunities. Yet to date, there have been no other viable plans brought forward to realize the critical need for an interoperable broadband network for public safety.

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[3] *See* 47 U.S.C. § 309 (j)(4)(D).

The implementation of a shared commercial and public safety network presented a myriad of complex and novel issues. In adopting these rules, I questioned our approach and raised the concern that there was no guarantee that the model we created, as structured, would nurture a nationwide interoperable public safety system that would be both commercially viable and technically feasible. Though I would have preferred direct Federal funding for building a national public safety broadband network, I was nevertheless painfully aware that the public-private partnership framework itself presented the only option available to us. And while this approach could have succeeded, the rules we ultimately adopted simply did not reach the appropriate balance to meet the needs of both a commercial partner and public safety. And while I advocated and fully supported modifications to the rules, including waiving a portion of our designated entity rules to allow a D Block winner to wholesale greater than 50 percent of the spectrum, and reducing the additional default payment percentage, these after-the-fact remedies were just not enough to woo a successful bidder.

So as we look to revisiting the rules for the D Block, we need to explore all aspects of proposals intended to help public safety keep apace through this auction. A true public-private partnership must meet the needs of both partners. If public safety's needs are not met, the basic objective is not met. If a private partner's need for a return on capital and regulatory certainty are not met, then that partner will not be in a position to attract the capital necessary to meet public safety's objectives. A partnership is just that, and both sides must win to make it work.

We need to do a top-to-bottom review of what went wrong so we can make it work in the next round. We will need to work closely with our friends in public safety, as well as potential private sector partners, and the financial community who may provide the capital, to find a balance that works for all parties.

First and foremost, we must provide upfront appropriate and detailed guidance to allow parties to make a bona fide financial viability assessment. In the notice of proposed rulemaking I anticipate the Chairman will circulate, we need to step further back than only looking at reducing the reserve price or modifying the buildout requirements. We need to peel back the onion to the core framework to seek comment on all aspects of the re-auction. While I continue to believe that the public-private partnership can succeed, we certainly need to seek the public's comment on alternatives and modifications to that model. We should also look at whether alternatives exist to nation-wide licensing, regional or otherwise, that might attract bidders and still serve the needs of public safety. And, in light of auction results on the other 700 MHz blocks, we should seek comment on whether we should consider limiting eligibility for the D Block re-auction and if so, in what way. Can and should the Commission use this re-auction as an opportunity to balance the goal of providing an interoperable broadband communications network for public safety with that of facilitating a new entrant? What type of re-auction provisions should be included? What technologies and features are feasible? How do we better define the role of the Public Safety Trust and its interplay with the commercial entity? What additional licensing term flexibilities might create incentives for bidders?

I do not have the answers to these and the many other questions that need to be asked about the re-auction of the D block spectrum. In order to move forward successfully, we will need to rely on the input of this Subcommittee, private sector partners, the financial community, as well as public safety. Only with this vital input will we be well positioned to provide detailed guidance on the many elements of a re-auction.

Mr. Chairman, thank you for calling this timely hearing on post 700 MHz auction issues. I look forward to hearing from you and all the members of the subcommittee on this issue, as well as any other issues of concern.

SUMMARY OF TESTIMONY OF JONATHAN S. ADELSTEIN
COMMISSIONER,FEDERAL COMMUNICATIONS COMMISSION
SUBCOMMITTEE ON TELECOMMUNICATIONS AND THE INTERNET
COMMITTEE ON ENERGY AND COMMERCE, US HOUSE OF REPRESENTATIVES
"OVERSIGHT OF THE FCC - THE 700 MHz AUCTION"
April 15, 2008

Ideally, this auction would have facilitated the emergence of a "third" broadband channel to provide consumers everywhere the benefits of a competitive, high-quality wireless broadband network. As I indicated in July at our open meeting, we missed a golden opportunity to open that elusive third channel into the home. While the auction outcome represents progress for consumers in terms of new openness for devices and applications, I do believe we could have done more to promote open markets by adopting a wholesale model to attract vigorous competitive alternatives.

It is also appalling that women and minorities were virtually shut out of this auction, with women-owned bidders winning no licenses and minority-owned bidders winning less than 1 percent of licenses. We clearly failed to meet our statutory obligation in 309(j) to expand diversity in the provision of spectrum-based services.

I am pleased that the auction results triggered the open access requirements on the C Block, offering consumers a new paradigm that they certainly deserve. Our decision to include these conditions, though modest in its application to a 22 MHz swath of spectrum, has redirected our future approach to spectrum policy in allowing for an open access regime for devices and applications. This will no doubt, improve the consumer experience. It will be critical for us to continue to assess the implementation of our open access requirements on the C Block as well as the extent to which open access develops on other spectrum. We move forward with cautious optimism.

The tragic failure to sell the D block represented a lost or at best delayed opportunity to come to grips with our country's public safety dilemma. We failed to achieve the proper balance between the needs of public safety and a commercial partner. As we look to revisiting the rules for the D Block, we need to explore all aspects of proposals intended to help public safety keep apace through this auction. First and foremost, we must provide upfront appropriate detailed guidance to allow parties to make a bona fide financial viability assessment.

We will need to rely on the input of this Subcommittee, private sector partners, the financial community, as well as public safety. Only with this vital input will we be well positioned to provide detailed guidance on the many elements of a re-auction.

Mr. MARKEY. Thank you, Commissioner Adelstein.

Now we will hear from our final commissioner, Commissioner Rob McDowell. We welcome you back, sir. Whenever you are ready, please begin.

STATEMENT OF ROBERT M. MCDOWELL, COMMISSIONER, FEDERAL COMMUNICATIONS COMMISSION

Mr. MCDOWELL. Thank you, Mr. Chairman and ranking members of the committee and all members of the committee.

As you have heard this morning, Auction 73 raised a record amount of revenue and successfully reallocated this valuable spectrum to licensees who will use it to roll out new and exciting wireless broadband services, enriching the lives of all Americans.

We are here today, however, because two important objectives of the auction were not met. First, the FCC failed to entice a winning bidder to build a nationwide interoperable broadband network for America's public safety users, and second, the FCC failed in its quest to attract a new national broadband provider, the much-sought-after third pipe. Today gives us an opportunity to move beyond rhetoric, analyze the lessons learned and move forward together in a positive and constructive manner.

Last summer's 700 MHz Order included a plan to spark a public-private partnership by allocating 10 MHz, known as the D block, on top of the 24 MHz Congress previously gave to public safety. We did this to try to create an incentive for the private side of the partnership to invest risk capital to build a nationwide public safety network suitable for 21st century challenges, something that all of us have been discussing since the attacks of 9/11. In the absence of a congressionally appropriated funding for this network, the Commission concluded that this type of public-private partnership was the best way to jump-start funding and construction, and I supported this approach.

I have met with a number of parties since the anti-collusion prohibitions were lifted. Early critiques reveal that potential bidders were deterred by onerous build-out and service requirements that required the eventual licensee to incur massive costs in an atmosphere of extreme uncertainty regarding how many, if any, public safety entities might actually sign up as paying customers. I am eager to put this matter out for additional public comment and also to hear from Congress regarding new ideas.

With respect to the open access condition in the C block, I have long acknowledged that while we could agree on the destination, a market that providers consumers with device and application portability, my colleagues and I could respectfully disagree about the best path to take us there.

I cast the only dissent against the open access and reserve price requirements because the evidence in the record told me that the market was already headed toward open access through natural evolution. As I pointed out in my dissent, I also did not think that the plan would achieve the advertised goal of attracting new broadband competition, and I was concerned that larger carriers would avoid the encumbered C block and outbid smaller players in these smaller, unregulated spectrum blocks. Sadly, it appears that my fears proved to be correct, but I wish I had been wrong.

The bottom line is that the smaller, unencumbered blocks sold on average for almost three times more than the larger, more regulated block. Large and small players have already commented that the encumbrance on the C block had an effect on pricing because bidders put a premium on the clean spectrum. Acting in an economically rational manner, large incumbents outbid many smaller players in smaller blocks. Smaller players had nowhere else to go, while no new broadband provider emerged.

In their defense, I do not think that my colleagues intended these consequences to be the end result and perhaps that is the point. The lesson we can draw from this experiment gone awry is that attempts to over-engineer markets always produce unintended consequences and costs, costs that ultimately consumers will pay. The auction's legacy may be less innovation and less competition, not more, and consumers could be shortchanged as a result, but we may never know for sure.

Make no mistake, I support licensees rolling out open networks if consumer demand so warrants. In fact, the biggest unwritten story is that nascent device and application portability were already coming to market long before the FCC got involved last summer.

At the end of the day, the lesson learned from this auction is that we policymakers should proceed mindful of the unintended consequences of our actions, especially as technologies and consumer tastes evolve.

Again, thank you for having us here today and I look forward to working with you on these and many other matters.

[The prepared statement of Mr. McDowell follows:]

STATEMENT OF ROBERT M. MCDOWELL

Good morning Mr. Chairman, Ranking Member Stearns and distinguished members of the Subcommittee. Thank you for inviting us to appear before you this morning to discuss the recently completed 700 MHz auction, known as Auction 73.

As you know, Auction 73 raised a record amount of revenue, over $19 billion. The auction also succeeded in reallocating this valuable slice of the airwaves to licensees who will use it to roll out new and exciting wireless broadband services, enriching the lives of all Americans.

Nonetheless, we are here today because two important objectives of the auction were not met. First, the FCC failed to entice a winning bidder to build a state-of-the-art, nationwide, interoperable network for America's public safety users. Second, the FCC failed in its quest to attract a new national broadband provider, the much-sought-after "third pipe." Today gives us an opportunity to move beyond rhetoric, analyze the lessons learned and move forward—together—in a constructive manner.

Last summer's 700 MHz Order included a plan to spark a public-private partnership by allocating 10 megahertz of spectrum for public safety use, known as the "D Block." This spectrum block was added on top of the 24 megahertz Congress allocated to public safety in 1997. The Commission created this framework after working closely with the public safety community, and I supported it. Hopes were high that this additional spectrum would provide an incentive for a private entity to construct a nationwide, interoperable, broadband network all of us have been discussing since the attacks of 9-11.

Even though public safety already had at its disposal 97 megahertz of spectrum in total to serve America's approximately two million public safety users—including 24 megahertz in the "beach front" quality 700 MHz Band, and 50 megahertz in the 4.9 GHz Band—the Commission allocated an additional 10 megahertz above and beyond what Congress gave. We did this to try to create an incentive for the private side of the public-private partnership to invest risk capital to build a nationwide public safety network suitable for 21st century challenges. In the absence of congressionally-appropriated funding for this network, the Commission concluded that this type of public-private partnership was the best way to jump-start funding and construction.

I have met with a number of parties since the anti-collusion prohibitions were lifted. Early critiques of the Commission's efforts reveal that potential bidders were deterred by onerous build-out and service requirements that required the eventual licensee to incur massive costs in an atmosphere of extreme uncertainty regarding how many, if any, public safety entities might actually sign up as paying customers. I am eager to put this matter out for additional public comment and also to hear from Congress regarding new ideas.

A positive attribute of our order was the band plan for the remaining commercial blocks of the 700 MHz spectrum, which I also supported. The band plan we established was comprised of four spectrum blocks of various sizes (ranging from six to 22 megahertz), each of which was divided into a mix of geographic area sizes, including Cellular Market Areas (CMAs), Economic Areas (EAs), and Regional Economic Area Groupings (REAGs). The plan was advocated by a broad array of interested parties, including possible new entrants, technology companies, as well as existing wireless license holders. I was hopeful that the band plan, minus the open access requirement, would provide new opportunities for a wide variety of technologies and business plans.

With respect to the open access condition, which was imposed on the large, 22 megahertz portion of the band known as the "C Block," I acknowledged that while we could agree on the destination—a market that provides consumers with device and application portability—my colleagues and I could respectfully disagree about the best path to take us there. At the same time, I was disappointed that the majority did not try to work with industry to forge a consensus solution rather than rush to regulate without thinking through possible unintended consequences.

I cast the only dissent against the open access requirements because the evidence in the record told me that the market was already headed toward open access through natural evolution. I also did not think that the plan would achieve the advertised goal of attracting new broadband competition. Additionally, as I pointed out in my dissent, I was concerned that larger carriers would avoid the encumbered C Block and outbid smaller players in the smaller, unregulated spectrum blocks. Sadly, it appears that my fears proved to be correct, but I wish I had been wrong.

Here is what we know: the price for the "open access" C Block was 77 cents per megahertz pop, and it was purchased not by a new entrant, but by a large incumbent wireless carrier. On the other hand, the average price of the unencumbered B Block was an unprecedented $2.65 per pop. Even the A Block, unencumbered, but which some had argued was "less desirable" because it neighbors with higher-powered broadcast operations and thus might be susceptible to harmful interference, went for an average of $1.13 per pop.

The bottom line is that the smaller unencumbered blocks sold on average for almost three times more than the larger, more regulated block. Large and small players have already commented that the encumbrance on the C Block had an effect on pricing because bidders put a premium on the clean spectrum. Acting in an economically rational manner, large incumbents outbid many smaller players in smaller blocks. Smaller players had nowhere else to go, all while no new broadband provider emerged.

Comparing the numbers of licenses won with bidding credits in prior auctions with those won in Auction 73 is imprecise at best. The fact is, in Auction 73, more than half of the spectrum (32 of the 62 megahertz) was available only in nationwide slices. The 10 megahertz D Block was carved into a nationwide license at the outset. And, although carved into REAGs, in practical terms, the 22 megahertz C Block was available only as a nationwide license due to the combinatorial package bidding allowed in that band. Thus, the open access condition aside, the C Block was not a realistic option to either those regional and smaller entities seeking to bolster holdings in an existing service area, or to those potential new entrants that would need a good deal of bandwidth, while desiring to purchase more conservatively. As a result, the 379 licenses won with bidding credits in Auction 73 overwhelmingly comprise only the smallest markets as measured by depth (the amount of megahertz afforded in each), breadth (the geography covered and pops served), or both.

In their defense, I do not think that my colleagues intended these consequences to be the end result. And perhaps that is the point: the lesson we can draw from this experiment-gone-awry is that attempts to over-engineer markets always produce unintended consequences and costs—costs that ultimately consumers will pay. The auction's legacy may be less innovation and less competition, not more; and consumers may be short-changed as a result. But we may never know for sure.

Make no mistake, I support licensees rolling out open networks if consumer demand so warrants. Nothing under the Commission's prior rules has prevented this development. In fact, the biggest unwritten story is that nascent device and application portability were already coming to market long before the FCC got involved last summer. Take, for example, the efforts of two carriers that, in 2006, launched dual-mode cellular-Wi-Fi handsets designed to make voice calls on cellular GSM networks and at Wi-Fi hot spots—both at home and in public—using voice-over-Wi-Fi technology, with seamless handoff between the two types of networks. Or the November 2007 introduction of Android, a Linux-based software stack that consists of an operating system, middleware, a user interface and applications, which had been in development since 2006. Or last fall, and after more than a year in the making, even the two largest wireless carriers each announced initiatives to allow customers to use any wireless device and to employ elective applications on their respective networks. In short, consumers were already starting to breach the walled gardens of yesterday well before the FCC rendered its mandate.

It is also worth briefly noting that, even now, it remains unclear as to what "open access," in the form of a government mandate, means. It may be that the winning bidder will define this term in the end, but that remains an unanswered question for now. Then again, many important questions remain unanswered, and that is why we are here today: to try to arrive at some answers so we can move forward together.

Conclusion. At the end of the day, I respectfully submit that the lesson learned from this auction is that we policy-makers should proceed mindful of the unintended consequences of our actions, especially as technologies and consumer tastes evolve. Again, thank you for having us here today. I look forward to working with you on these and many other challenges.

SUMMARY

Auction 73 raised a record amount of revenue, and successfully reallocated this valuable spectrum to licensees who will use it to roll out new and exciting wireless broadband services, enriching the lives of all Americans. We are here today, however, because two important objectives of the auction were not met. First, the FCC failed to entice a winning bidder to build a nationwide, interoperable, broadband network for America's public safety users. Second, the FCC failed in its quest to attract a new national broadband provider, the much-sought-after "third pipe." Today gives us an opportunity to move beyond rhetoric, analyze the lessons learned and move forward—together—in a constructive manner.

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I have met with a number of parties since the anti-collusion prohibitions were lifted. Early critiques reveal that potential bidders were deterred by onerous build-out and service requirements that required the eventual licensee to incur massive costs in an atmosphere of extreme uncertainty regarding how many, if any, public safety entities might actually sign up as paying customers. I am eager to put this matter out for additional public comment and also to hear from Congress regarding new ideas.

With respect to the open access condition in the "C Block," I acknowledged that while we could agree on the destination—a market that provides consumers with device and application portability—my colleagues and I could respectfully disagree about the best path to take us there. I cast the only dissent against the open access requirements because the evidence in the record told me that the market was already headed toward open access. I also did not think that the plan would achieve the advertised goal of attracting new broadband competition, and I was concerned that larger carriers would avoid the encumbered C Block and outbid smaller players in the smaller, unregulated spectrum blocks. Sadly, it appears that my fears proved to be correct, but I wish I had been wrong. Large and small players have already commented that the encumbrance on the C Block had an effect on pricing because bidders put a premium on the clean spectrum. Acting in an economically rational manner, large incumbents outbid many smaller players in smaller blocks, all while no new broadband provider emerged.

In their defense, I do not think that my colleagues intended these consequences to be the end result. And perhaps that is the point: the lesson we can draw from this experiment-gone-awry is that attempts to over-engineer markets always produce unintended consequences and costs—costs that ultimately consumers will pay. Make no mistake, I support licensees rolling out open networks if consumer demand so warrants. In fact, the biggest unwritten story is that nascent device and application portability were already coming to market long before the FCC got involved last summer. At the end of the day, I respectfully submit that the lesson learned from this auction is that we policy-makers should proceed mindful of the unintended consequences of our actions, especially as technologies and consumer tastes evolve.

Mr. MARKEY. Thank you, Commissioner McDowell, very much, and that completes the time for opening statements from the commissioners, so the chair will now turn and recognize himself for a round of questions.

In the headlong pursuit of moving away from thousands of public safety entities all developing their own plans and networks, which historically has made interoperability issues worse, are we actually creating a new problem by having a single public entity in Washington and a sole network provider for the whole country call the shots for diverse areas of the country with distinct needs? Let me just ask this question, yes or no. Should there be more focused regional emphasis while still insisting on national capability and interoperability? Let me come across. Commissioner Adelstein?

Mr. ADELSTEIN. I think it is an option we should have on the table. I think we need to keep all options open and take a look at whether regional licenses would make sense as well as the national.

Mr. MARKEY. Commissioner Copps?

Mr. COPPS. I agree.

Mr. MARKEY. Chairman Martin?

Mr. MARTIN. I certainly agree that all options should be on the table. I think the challenge is how you determine, how you solve the interoperability issues when you break up the licenses into smaller pieces, which is the thing that public safety highlighted for us last year.

Mr. MARKEY. Commissioner McDowell—I mean Commissioner Tate. I am sorry.

Ms. TATE. Yes, sir, I think we should be looking at everything, and I asked public safety about that when they were in my office last week, so you might want to discuss that with the next panel.

Mr. MCDOWELL. I agree with my colleagues. It is something we should consider but I would have concerns about the interoperable aspect of it and we should ask public safety in the next panel.

Mr. MARKEY. And what could be done to ensure that the next D block auction can simultaneously ensure public safety objectives while creating new wireless competition? Could you focus on spectrum caps, wholesale requirements, and should we have six regional licenses rather than just one license so that each region could develop its own public safety and competition strategy? Chairman Martin?

Mr. MARTIN. You certainly could try to focus on competition by having caps or wholesale requirements. I would highlight that the public safety community themselves were very concerned about implementing those kind of requirements in their spectrum last time.

So I would think that would be another thing that I would be interested in what public safety's concern would be in that regarding.

Mr. MARKEY. Commissioner Copps?

Mr. COPPS. Yes, and the spectrum caps and looking at wholesale and a look at the idea of the six, but cognizant of the problems that have been mentioned. But what we need really before we make these final decisions or commit to final decisions is getting the facts and the data and the analysis that we currently don't have and that job is incumbent upon us and it is incumbent upon public safety and the commercial sector too.

Mr. MARKEY. Commissioner Tate?

Ms. TATE. You know, when you brought up spectrum caps, of course Rob and I weren't here and so that is something that I would like to have an opportunity to look at, and I agree that public safety has got to be part of these discussions going forward because I know some of these discussions we had previously and that is why we ended up where we are.

Mr. MARKEY. Commissioner Adelstein, could the Commission just insist that every one of the regional licensees if you went to the regional license model have an interoperable system? Couldn't you just mandate that?

Mr. ADELSTEIN. Absolutely. I think that it is not an impediment at all to interoperability if we structured the rules right. We could require that certain standards would be met that would be interoperable no matter who the licensees were, so you could have 6 or 10 or 20 different licensees and all the systems would be required as a condition to be interoperable.

Mr. MARKEY. Commissioner McDowell, isn't that something that you could do now at the FCC, condition on regional licenses that they all have to be interoperable? Wouldn't that be a reasonable condition and something that you could enforce?

Mr. MCDOWELL. Certainly we have the authority to do that and it should be something that is considered in a public comment period.

Mr. MARKEY. Chairman Martin, is that something that you could mandate as a condition if you moved to regional licenses, that they all have to be interoperable?

Mr. MARTIN. I think we can always put that condition on it. I think it was practically how that could be achieved from a technical perspective, is where the concerns were raised when we discussed that option last time.

Mr. MARKEY. And do you know how many women-owned businesses won licenses, Chairman Martin?

Mr. MARTIN. The Commission doesn't actually keep track of how many women- and minority-owned businesses. After the Commission's changes in policies that occurred after the Adarand decision in the mid-1990s, the Commission moved away from having designated entities based upon women or minority status and moved to them based on small businesses alone. So all of the information we have is just what is self-reported, so we don't actually keep track of that.

Mr. MARKEY. Commissioner Adelstein?

Mr. ADELSTEIN. Based on self-reporting, there were no women bidders who won. That may not be the final number but based on those who reported themselves as women, not one out of over 1,000 licenses that were won were won by women-owned businesses.

Mr. MARKEY. And if it is more than zero, it is not much more than zero out of 1,000. Is that what you are saying? Do you agree with that, Commissioner?

Mr. ADELSTEIN. That is right. There may be some.

Mr. COPPS. I agree with that. I heard that there was one, so it is either zero or one.

Mr. MARKEY. Commissioner McDowell, have you heard anything about women and minorities?

Mr. MCDOWELL. I have not heard anything different from those figures.

Mr. MARKEY. Commissioner Tate, have you heard anything about women winning licenses?

Ms. TATE. I did ask and I think that just anecdotally there may have been women who won 150 licenses, but again, we are prohibited from enforcing race- or gender-specific reporting, so it is self-reporting.

Mr. MARKEY. No, I understand.

Ms. TATE. And I am concerned.

Mr. MARKEY. We all have to be concerned by this. We all have to ensure that we include more minorities and women in the future of telecommunications in the 21st century. We gave away most of the licenses to white men who were already well connected in the 1930s, 1940s, and 1950s, and to dig out of that hole is something that we all have to focus on.

The chair's time has expired. The chair recognizes the gentleman from Florida, Mr. Stearns.

Mr. STEARNS. Thank you, Mr. Chairman.

Commissioner McDowell, I just wanted to start with you after hearing your opening statement. From this experience of this auction, specifically the auctioning off of the C block, doesn't the auction show that conditioning spectrum lets different parties who are maneuvering to perhaps gain the auction and create the unintended consequences you talked about?

Mr. MCDOWELL. I think there are always unintended consequences from regulation, and this was an experiment, and of course, this is water under the bridge, so the licensees have those licenses at this point. I think a lot of what we hear about the end result is complicated and complex. I think we could have done better than what we did in the AWS auction. I think if we look at the amount of spectrum that actually the successful smaller bidders walked away with compared with where they got it in terms of geography and population density, it becomes a little more complicated, a little more clear as we get into those more granular details that there was not as much robust bidding by smaller entities as there could have been because you had larger, deeper-pocketed bidders coming into some of those smaller blocks as a result of being scared away by the encumbrance. The largest block, the C block, was taken for a song at 77 cents per megahertz pop, whereas some of these smaller blocks were at $2.67, about three times the price. So I think that tells a story. Also, it tells a story—we talked to the largest of the bidders and the smallest of the bidders, and they have the same story, that there were unintended consequences as a result of that encumbrance.

Mr. STEARNS. Chairman Martin, I just would ask you to comment on that. I am not necessarily dwelling on the past. I mean, that was part of what our letter that we did on June 29, that Ranking Member Barton submitted and we signed but I think just as we go to the future, just to think about when you start to put conditioning on the spectrum, what happens. So perhaps the same question I asked Commissioner McDowell, Chairman Martin, you might answer also. I mean, do you feel that those conditions hurt the sale and we could have gotten more money and allowed this maneuvering by Google?

Mr. MARTIN. I think that we end up having to put auction rules in place that balance a variety of public interest factors, and that raising money alone is not our sole goal. I think it is important to get a fair return, which I think is very difficult to argue that $19 billion wasn't a fair return.

Mr. STEARNS. Well, let me just say——

Mr. MARTIN. But I think the open access conditions were much more critical to impose and I think that as a public interest, from a public interest perspective, I think they were critical to further innovation——

Mr. STEARNS. Let me ask you this question. If you had to do it again, would you have done the same thing for the auction block for——

Mr. MARTIN. For the C block?

Mr. STEARNS. For the C block.

Mr. MARTIN. To put open access conditions on it, yes, I still would.

Mr. STEARNS. In other words, you would not change for the C block anything differently? You would have done the same thing?

Mr. MARTIN. I would still impose open access conditions on it, yes, I sure would.

Mr. STEARNS. The same access conditions that you had, no change at all?

Mr. MARTIN. I would still put it the same open access. I would still put the open access conditions.

Mr. STEARNS. Commissioner Tate, just the same question for you that I asked McDowell is, when you had the C blocks and the conditions were put on there, do you think that was a good idea?

Ms. TATE. Well, I think once again——

Mr. STEARNS. Move the mic a little closer to you.

Ms. TATE. Sorry. Once again I think it is a balancing of interests, so I didn't want to go all the way to wholesale.

Mr. STEARNS. So in retrospect, you wouldn't have changed anything either?

Ms. TATE. You know, it is awfully difficult. Hindsight is——

Mr. STEARNS. Hindsight gives you great insight.

Ms. TATE. It is a perfect science, yes. So I am not sure. I am not sure how to answer your question.

Mr. STEARNS. Commissioner Copps?

Mr. COPPS. Yes, I would have changed some things. I agree with what Chairman Martin said about the open access insofar as the device and applications go. I would have gone beyond that open access on a wholesale basis and I would have looked at some of these other suggestions that have been talked about today and possibly trying to use——

Mr. STEARNS. OK.

Mr. COPPS [continuing]. Other approaches for new entrants.

Mr. STEARNS. OK. Commissioner Adelstein?

Mr. ADELSTEIN. I think your point is correct, that auction revenues were reduced as a result of the——

Mr. STEARNS. Yes, I think that is what we have to all admit.

Mr. ADELSTEIN. I think I certainly would admit that. At the same time, the goal of the act and law——

Mr. STEARNS. And wouldn't you agree that small guys, small people got shut out too, in addition to——

Mr. ADELSTEIN. I think there was a tradeoff there. Unfortunately, I think we could have done the C block in such a way as we broke it into smaller pieces, even with the open access——

Mr. STEARNS. So in hindsight, you would have done it that way?

Mr. ADELSTEIN. Yes, that is what I asked for at the time.

Mr. STEARNS. Let me ask each of you before my time is gone, particularly in light of the fact that Mr. Dingell has given his opinion. The question is for all five commissioners. How many of you would support re-auctioning the D block solely for commercial purposes and then having Congress pass a law to allow public safety to use the proceeds from that re-auction? Commissioner McDowell?

Mr. MCDOWELL. That would certainly be an item for public comment.

Mr. STEARNS. You would support that, Commissioner Tate?

Mr. MCDOWELL. Yes.

Ms. TATE. I would support getting comment and especially from public safety, and especially not knowing whether it is going to raise enough money to actually fund what they need.

Mr. STEARNS. Commissioner Martin?

Mr. MARTIN. Putting any proposals out for comment is easy. I think the question is, you asked me, do I support that at this time as the conclusion. I would say no. If Congress passes a law and gives public safety the amount of money they need to build a public safety network, then obviously we wouldn't need to put a condition on it, but in the absence of that, I think we need to move forward to solve this important interoperability challenge.

Mr. STEARNS. Commissioner Copps?

Mr. COPPS. That would not be my first priority. I think we have invested a lot of work in the public-private partnership and I think we need to see that through.

Mr. STEARNS. Commissioner Adelstein?

Mr. ADELSTEIN. It is an option I think we should consider. I am not sure we would raise enough revenue to build a system and of course we would need congressional action before that but it is certainly an option I think we should consider.

Mr. STEARNS. Thank you for your candid comments, and I yield back, Mr. Chairman.

Mr. MARKEY. The gentleman's time has expired. The chair recognizes the chairman of the full committee, Mr. Dingell.

Mr. DINGELL. Mr. Chairman, again, I thank you for your courtesy and thank you for the hearing.

Ladies and gentlemen of the Commission, I have some questions which, unfortunately, we are going to be so compressed, it is going to be hard to do with regard to the timing. Could you just please answer this: Is there anyone who can tell me that you are not committed to enforcing the conditions that the FCC has placed upon the C block? I believe you are all committed to that. Is that correct?

Mr. MARTIN. That is correct.

Mr. DINGELL. Now, again, members of the Commission, and I apologize for this discourtesy, this is the same kind of question. In your opinion, do the open network policies announced by Verizon meet last year's C block requirements? Is there anyone who disagrees that they do meet last year's C block requirements?

Mr. COPPS. I think the devil will be in the details to see how they are implemented and exactly what they mean. We don't know.

Mr. DINGELL. Thank you.

Any other comments, Mr. Chairman?

Mr. MARTIN. No, I think I agree with Commissioner Copps. Obviously we will wait and see how they unfold.

Mr. DINGELL. Other members of the Commission?

Does AT&T's articulation of its policies satisfy the C block requirements? Do you agree or disagree with that statement, members of the Commission, please?

Mr. MARTIN. I don't think that AT&T's current articulation would satisfy all those policies, no. I think it is more open that they used to be but I don't think that they would satisfy the openness requirements.

Mr. DINGELL. Thank you.

Mr. COPPS. My answer is, we need to see.

Mr. DINGELL. Now, could you tell us then about your concerns about T-Mobile's articulated policies? Do you agree that those comport with the policies of the Commission or not?

Mr. MARTIN. I think that T-Mobile's—I think that T-Mobile has taken some steps toward a more open platform but I don't think they have completely opened up their network yet either.

Mr. DINGELL. Members of the Commission?

Mr. COPPS. Again, we don't know, and all of these questions you are asking just point up the need for clarity and knowing beforehand and making sure if we are trying to get to an objective that we actually get there.

Mr. DINGELL. Other members of the Commission?

Mr. MCDOWELL. Mr. Chairman, I think it is important to point out that only Verizon is subject to the conditions of the C block and that AT&T and T-Mobile have responded in kind in some regard but I also think it is very important to note that the open access conditions that the commissioners came out with last summer are not well defined. Verizon is in a terrific position to define those themselves.

Mr. DINGELL. Would you want, members of the Commission, to also make similar—to address Sprint's announced openness principles? Mr. Chairman?

Mr. MARTIN. I think that the same—I think of the same articulation, that we will have to see what the details are, but they haven't announced as open a platform as Verizon has thus far, who is the only one that this condition applies to.

Mr. DINGELL. Thank you.

Other members of the Commission, please?

Mr. COPPS. Again, we don't know any details on the Sprint point either. Perhaps this is the reason why we need to go forward and act on the Skype petition.

Mr. DINGELL. With apologies again, Mr. Chairman, members of the Commission, can you give me a yes or no answer, members of the Commission? Do you believe that a plan involving public-private partnership can be developed that results in successful auctioning of the D block, Mr. Chairman and then members of the Commission?

Mr. MARTIN. Yes, I think that one could be.

Mr. DINGELL. Members of the Commission?

Mr. COPPS. Yes, I do.

Ms. TATE. Yes, sir.

Mr. DINGELL. I gather you all are in belief that that is so. Now, as I think we all agree, it is important to get the re-auction done right rather than getting it done quickly. Now, members of the Commission, would you agree that the Commission should arrive at a structure involving public-private partnership that will result in a successful auction of the D block?

Ms. TATE. Absolutely.

Mr. MARTIN. Yes.

Mr. DINGELL. I am troubled here that we seem to have a situation where there is some kind of delegation away to a licensee or some other purpose or to a for-profit advisor. I think that your efforts at the Commission to create a workable public-private partnership have been very much in the public interest and I commend you for it. But I am curious. We seem to have here then this public for-profit advisor and I am wondering how that is going to work and how the Commission is going to supervise or superintend that situation to see to it that the law and the public interest is properly protected here. Could you, ladies and gentlemen of the Commission, give us some counsel on that? Because we are going to have the next panel that I hope is going to have some better explanation than we have gotten so far. Perhaps you can assist us.

Mr. MARTIN. I don't think that the Commission ever anticipated or envisioned that the public safety entity would try to establish its own for-profit subsidiary, and I think that is something that we did not anticipate and I think that it is something that has frankly troubled at least myself and I know at least one of the other commissioners, I believe, if not more, and I think that that is something that we would need to try to address going forward.

Mr. DINGELL. Members of the Commission, could you give us your thoughts and comments, please?

Mr. ADELSTEIN. I believe we did not provide adequate clarity in the rules that we set. For example, we needed to better define the role of the public safety trust. By leaving the details for subsequent to the auction, it was allowing an enormous amount of flexibility by independent agents to try to do what they wanted to do without adequate oversight by the Commission. So I feel that it was our mistake. We allowed that to happen by not properly defining the terms in advance, and this time around I hope we won't make that mistake. We will better define the role of the public safety trust.

Mr. DINGELL. Other members of the Commission, ladies and gentlemen?

Mr. COPPS. I just think on the whole front of the public safety, we need to view that as a nonprofit exercise and I would just also emphasize how this points up the need for strong, proactive FCC involvement.

Mr. DINGELL. Ms. Tate, I have observed you nodding. Maybe you want to make a comment here.

Ms. TATE. Yes, sir, I would agree. I had assumed that the trust would be one that would be nonprofit so now once again that we have the luxury of hindsight, we can try to build that in going forward, and I would agree with my colleagues, it is concerning.

Mr. DINGELL. Sir?

Mr. MCDOWELL. I would concur that I was surprised by that announcement. I think it is a terrific series of questions for the next panel and in terms of FCC oversight, something we should explore in an open-ended NPRM.

Mr. DINGELL. Mr. Chairman, I note I have used more time than I am entitled to but I am very much concerned. I would like your permission, Mr. Chairman, and ask unanimous consent that I be permitted to submit a letter to the Commission and to have that and the Commission's response inserted in the record at the appropriate point because I am curious who is going to pay this money, how it is going to be paid, for what it is going to be paid, what is going to be done, and what all will be accomplished by this curious public-private partnership that is going to have an additional private partner of some kind. Mr. Chairman, I thank you.

Members of the Commission, I thank you for your courtesy.

Mr. MARKEY. The chair recognizes the gentleman from Texas, Mr. Barton.

Mr. BARTON. Thank you.

It is not often that people like myself get to tell people like yourself, I told you so, but I told you so. Myself and 13 other members back last summer or spring sent you guys a letter saying if you put all these conditions on the D block, you are either not going to get any bids or you are not going to get any good bids, and that is what happened. There is not a direct analogy in the political arena but if my reserve price is 50 percent of the votes plus one to stay in Congress and I only get a third of that, I am not here. So we had one bid on the D block auction, I think it was for $432 million, and I think the reserve price was $1.33 billion, so it hadn't been sold. So now we are back at square one. What is wrong with doing what I thought the FCC was going to do initially and just have an unencumbered auction and then perhaps use the proceeds of that 12 MHz to fund the public safety network? What is wrong with that?

Mr. MARTIN. Well, let me respond in two ways. First, I think there were two sets of conditions that you were concerned about in your original letter, not only working with public safety but the wholesale and open access conditions. The wholesale and open access conditions we didn't impose on the D block. We did impose a condition to work with public safety. We did so because it was the only way that we could see that a public safety network would actually be built. The Congress has not yet passed any law that would require any of the funding of the auctions to go to public safety networks. We don't have the authority to do that. There were several bills that were introduced. I think Congressman Stupak actually had one that would have said that all the proceeds over the $11 billion that Congress had scored it would go to a public safety network and then 50 percent of all auctions going forward. That is the—if that legislation had been enacted, of course the Commission wouldn't have done that but there was no legislation that was allowing us to redirect funds.

Mr. BARTON. So that is your only problem, is a funding mechanism for construction of the public network?

Mr. MARTIN. I think so. I mean, when I testified last year, I know Commissioner Copps testified to it as well, and I think several commissioners did, that the preferable option would be to fund and build a public safety network, but without that as an option, I think that the only other option we had to try to address public safety's urgent needs was to try to do a public safety partnership, and I think the direct funding of the network would certainly be preferable.

Mr. BARTON. Does everybody agree with what the chairman just said?

Mr. COPPS. I think, Mr. Barton, you raise an option and an interesting idea. It has questions of its own. One of them would be how do you keep the field of negotiation and the field of play level. It is not inherently level between the large network carrier and public safety, so that gets then to what is the role of the FCC going to be as the honest broker, and I think all of these things that we worked for very hard last time and obtained in some degree are still vitally important to maintain as we proceed down the road.

Mr. ADELSTEIN. I have to say I agree with the chairman's analysis. You know, we all share responsibility, and I hate to say it in front of Congress, but Congress has some responsibility too. If I could go back in hindsight and redo the law, I would say that you could have set aside the overage above the amount that CBO estimated, the $12 billion CBO estimated, would go into a public safety interoperable network and there would have been no cost, there would have been no need for a budget offset. But now that can't be done. So the fact that we didn't have that legislation in place made it impossible for us to channel those revenues directly into the interoperable public safety network, which required us to move to what is definitely a second-best alternative, the public-private partnership, and then we of course made major mistakes in how we structured the public-private partnership so it didn't succeed, so it was sort of mistake compounding mistake. Ideally, if Congress could pass legislation now that would enable us to put the results, the money coming from that 10 MHz plus other auctions potentially that we have coming, that would be sufficient to build an interoperable network.

Mr. BARTON. What is the estimate to build the public network? What would it be?

Mr. ADELSTEIN. I have heard different estimates. Six to $7 billion is one estimate I have heard.

Mr. MARTIN. I think that is right. It would be somewhere above $5 billion to $6 to $7 billion.

Mr. ADELSTEIN. Unfortunately, it would be surprising if 10 MHz sold for that much. If you look at what 22 MHz sold, for example, $5 billion to Verizon, it might not generate that much, so you might need to identify additional spectrum for sale that could be allocated for this purpose as well.

Mr. BARTON. Well, if we were to do this option that I am talking about, how long would it take to set the auction up?

Mr. MARTIN. I think under any of the potential options on how we would set up the auction, I think that we could—we need to do an NPRM establishing a new proceeding, setting final rules, and it takes several months to conduct the auction after that. I think no matter what rules we establish, the earliest we could probably conduct this auction is by the fourth quarter of this year.

Mr. BARTON. Well, that is my only question, Mr. Chairman. I am very concerned about this D block and once you tried everything else, go back to basics, and I respect the funding issue. I think that is valid. I would hope we could work on that, but the only other option that seems viable is the option that Commissioner Capps indicated in his opening testimony, which is to have the government build and run it, and history has shown that doesn't work very well in other things and I doubt it would work very well in this area either. So if we could have some version of what I talked about and find a way to fund it.

With that, I yield back.

Mr. MARKEY. I thank the gentleman. Actually, it is Congresswoman Capps and Commissioner Copps, although because of his views on spectrum caps and media ownership caps, we could call him Commissioner Capps as well.

Mr. BARTON. I apologize.

Mr. MARKEY. The chair recognizes the gentleman from Pennsylvania, Mr. Doyle.

Mr. DOYLE. Thank you, Mr. Chairman. I want to begin by thanking the Commission and Chairman Martin for your recent low power FM order. When we talk about public safety, these LPFM stations have played an important role in informing the public in emergencies, so thank you for that.

Chairman Martin, recently you gave a speech at CTIA, where you indicated your intention to dismiss the Skype petition. Now, that petition would have extended your C block openness rules to the larger wireless market, to those parts of the network where your Commission has acknowledged that carriers are not acting in the best interest of the consumers. Can you tell me why what is good in the 700 MHz band is not good in the broader wireless market?

Mr. MARTIN. Well, I think that at this time we should end up with not moving forward with it for two reasons. One is because we do see some movement as a result of what we put in place on the 700 to the other carriers making their networks more open, not as extensive as what we put in place in the 700, but we do see some movement and we were always hopeful when I had proposed the condition on the C block that it would have that kind of ripple effect. And number two, obviously if we imposed—if we adopted the Skype petition and imposed it throughout the industry, then it actually would have been unfair to do that in light of the fact that we had just auctioned off a piece of spectrum with that condition expressly and that would have meant that it was—it would have, as Congressman Stearns was raising, it would have lowered the revenues for that unfairly because if we adopted the Skype petition, that would have meant someone would have gotten an especially good deal on the C block. They would have paid less for it compared to other pieces because it had this condition and then as a result of it, it would now still—everyone would have that same condition. So I think we should dismiss it without prejudice. I think if the market doesn't—if it doesn't have the ripple impact, the Commission could come back and consider it later but at this point I think that it would be wisest to proceed with just seeing what happens with the C block.

Mr. DOYLE. And before I ask the other commissioners the same question, Chairman, just as a quick follow-up, what do you think is more important in these auctions, the revenues or the public interest being served?

Mr. MARTIN. I think the public interest being served.

Mr. DOYLE. Thank you.

Commissioner Copps, what are your thoughts on the Skype petition?

Mr. COPPS. I don't think that the petition should be dismissed on the basis of some movement. I should think it would only be dismissed on the basis of sufficient movement, and we don't have that.

Mr. DOYLE. Commissioner Adelstein?

Mr. ADELSTEIN. Well, I think it may be premature to dismiss the Skype petition. It is critical to assess the implementation of the C block conditions and the 700 MHz auction, its impact on other spectrum. I think we need to ensure that the benefits actually come to fruition.

Mr. DOYLE. Commissioner Tate?

Ms. TATE. Yes, sir. I think Mr. Dingell did a good job of kind of working down all the different proposals that have been promulgated by the companies about what they do plan to do regarding openness, and the other thing goes back to what the chairman was saying, that for those people who have already invested in their networks, you know, that we were doing this going forward on a new block of spectrum.

Mr. DOYLE. Commissioner McDowell?

Mr. MCDOWELL. I think I would agree with Chairman and Commissioner Tate on those assessments but I also think it is important to add that some of the announcements we have seen by carriers other than Verizon in the context of the C block have actually been in the works for about 3 years. These didn't come to market in the past 6 months. So I think the market is headed that way already. I do think it would also complicate matters and be unfair to the winner of that C block who did bid and the whole ecosystem that bid on that particular block and that encumbrance going forward.

Mr. DOYLE. So, Chairman Martin, tell me, if what you hope will happen doesn't happen, if we don't start to see this openness spread, what ability do you have? Do you retain some, you know, regulatory raised eyebrow to ensure that the carriers do what you hope they do, and how will you enforce this if we don't see this openness spread in the market like you hope it will?

Mr. MARTIN. Well, I think first we need to make sure we are enforcing the condition of the C block but I think the Commission does retain, as you said, the regulatory, I guess, eyebrow to continue to look at it, and I think that when I was talking about dismissing the Skype petition, as I said, I don't think it would be without prejudice for them to be able to file it again. But I also don't think that we were prepared to act on it now and I just didn't think it was appropriate to continue to leave it pending. If we thought we weren't ready to act on it, which even the other commissioners who said they don't want to dismiss it, I don't think they feel like they are ready to act on it and require it, or at least that is what some of them have said publicly, and I think that it shouldn't be just hanging around. I think we should dismiss it but not make a conclusion on it that would preclude it from being reconsidered again at a later time.

Mr. DOYLE. Mr. Copps?

Mr. COPPS. I don't think we should expect businesses or consumers to depend upon the raised eyebrow of the Commission. I think it is good to have rules going in. I think it is good to have principles going in that business understands because business needs to know the rules, can't operate with a question mark, and certainly the same applies to consumers.

Mr. DOYLE. Mr. Adelstein?

Mr. ADELSTEIN. I think the chairman is correct. How the Skype petition is dismissed, if it is dismissed, is very important. If it is done without prejudice, it is very different than if it is done with all kinds of assessments about the need to not have open models. So I want to watch very carefully how the item is actually constructed and what its implications are.

Mr. DOYLE. I see my time is expired, Mr. Chairman. Thank you.

Mr. MARKEY. The gentleman's time has expired. The chair would just note that the Public Safety Spectrum Trust at no point has opposed a whole strategy as part of a D block auction, so I just want to put that back out on the record once again.

Let me turn now and recognize the gentleman from Michigan, Mr. Upton.

Mr. UPTON. Well, thank you, Mr. Chairman.

I have got a couple questions I want to ask, the first two on DTV. I have been in and out of this hearing meeting with a number of constituents and I just finished meeting with the Bloomingdale telephone folks, which is a small carrier in my district, they provide all three services, and they were quite proud to tell me that they had inserted a flyer in their telephone billing to all of their consumers aimed primarily at those with just telephone service about DTV and they were going to offer the boxes. They have a little store. Bloomingdale is a blinker-light town, yellow on one side, red on the other. But they provide really terrific services and they were proud to tell me what they were doing, and I am just—you know, if a Bloomingdale Telephone Company can do that to their lifeline consumers, I think that was an edict that you all ruled on, I just wonder if you considered whether all telephone consumers, whether they be mobile or the giants, that may have just telephone service, might—if you considered something like that for all folks as it related to the information on DTV in terms of what they were going to do by the deadline, you know, getting a box, getting the coupon, et cetera.

Mr. MARTIN. Our initial focus has been on all the telephone companies, as you said, that were receiving universal service support for things like the lifeline and linkup programs. I think that the Commission took some pretty aggressive action in trying to require the different industries that the Commission regulates to help participate in the education of this effort and we thought—and I thought that that was appropriate. It was actually something that was suggested by Chairman Markey and Chairman Dingell last summer. But if you want us to go back and reconsider whether we should broaden that, I am sure the Commission would be happy to.

Mr. UPTON. Anybody else want to comment?

Mr. COPPS. I am always for more rather than less. I think that is a good idea. In the final analysis, I would go back though to the primary vehicle for this conversation, which is over television, and I am still worried about, while the effort is picking up, I don't think it is anywhere where it needs to be right now if we are going to have a relatively seamless transition.

Mr. UPTON. I just sort of felt that a flyer might be more instrumental. I am sure that you have seen many of the ads as I have on—for me, I have cable but I see it on literally all of the networks informing folks but perhaps sometimes if they have written document saying whether they need it or not and particularly if you—me, I am a Comcast subscriber. Assuring Comcast subscribers that they will not need because you have cable is something that you might not otherwise get if you just get it in this area, WGLA or something like that.

Last week there was some information that was released indicating that you all had fined a number of retailers for not having the appropriate information in their stores, and I just wonder how you came to that conclusion, what type of warnings might have been given. I don't know if it was—again, I just saw the press story, I didn't see your news release, whether it related to actual—as you remember, we actually had legislation that passed this committee in terms of the exact language that needed to be prescribed but it was struck in the Senate because of the Byrd rule. I would be anxious to know a little bit about how that all happened.

Mr. MARTIN. There were violations of three of our different rules that people received notices of current liability for. They were both violations that accrued as a result of them selling televisions that violated our tuner mandate. They were violations of the televisions that they were selling, so they had imported televisions post the date that they were allowed to. They were selling televisions from their stock that hadn't been properly labeled, as you were referencing. That was part of the legislation that the House had passed that had been struck but that required the television to be appropriately labeled as not having digital tuner, and then there were also some violations of having a V-chip that was capable of being upgraded to receive digital broadcast signals, not analog signals, as Chairman Markey had actually identified and had signaled to the Commission that there were concerns. All three of those areas, because they are involving retailers, we had had to submit warnings to people in terms of, you know, certifications that they were in violation previously. So in all of the cases there were warnings. This was a result of inspections that the enforcement bureau had done of thousands of retail outlets and also some information that had been provided to us. But we had warned people beforehand.

Mr. UPTON. Now, the last question I have is, based on the auction results, some have broached the idea of reinstituting spectrum caps. Ironically, the same folks that advocated for the caps are also decrying a U.S. broadband penetration vis a vis European and Asian countries. The original spectrum caps were listed by the FCC when it was clear that the mobile sources had substantially smaller spectrum allocations. The question is, how are we going to increase broadband penetration in the United States if we stop the U.S. carriers from increasing their spectrum allocations to offer faster and more robust mobile broadband services?

Mr. MARTIN. I think that is the concern with the limitations on how much spectrum that any one carrier could own that drove the Commission to raise those caps, or eliminate those caps before.

Mr. COPPS. Hopefully I would say new entrants and more competition and less consolidation in an industry where wireless is somewhere around the 2500 mark regarding the HHI index of the Department of Justice.

Mr. UPTON. Thank you. I yield back.

Mr. MARKEY. The gentleman's time has expired. The chair recognizes the gentleman from Texas, Mr. Gonzalez.

Mr. GONZALEZ. Thank you very much, Mr. Chairman.

My question will be directed to Chairman Martin. Well, first of all, in observation to what Mr. Upton was pointing out, I know that in San Antonio, as far as the notice going on on the transition, we are trying to actually do it through our city public service entity which obviously provides electricity, the things that all homes have in common. If they have a television, it is obviously electrically supplied. We are trying to get that notice out there. We are also having our suppliers of the converters, not just the Best Buys or the Radio Shacks but we actually have the HEB grocery store chain, which are located in those particular neighborhoods that are going to be impacted the most by the transition.

But my question, Mr. Chairman, would be, you state in your written testimony, the auction did not result in a single nationwide new entrant, and I know there have been similar observations by other members of the Commission. The question is, did that really come as any surprise? The basis for that is we are talking about people that build the highway, and I know that we had a lot of noise by people that provide services to the others or to the users of the highways, but when it comes to really building them, it is just such a tremendous challenge in the way of capital investment and so on that the sheer magnitude of the endeavor had to mitigate against maybe a new entrant, and that is a consideration and I just would want your thoughts. That is the first question.

And then I will allow you to answer on that, of course, and then maybe address the other question. Do the principles that have been adopted by the Commission that promote the building out of broadband and of course as much participation in all sectors by as many providers as possible also extend to wireless? My understanding is that those principles obviously do and as long as you are doing your job, I don't see the need, the necessity for a legislative fix. So the second question is, do the principles apply? I thought they did, and you can expound on that.

That does not mean that I do not have certain concerns and problems that have preexisted and that actions by the Commission I don't think really address some of the problems that have been created because of the fact that we don't have enough highway builders out there and then how they share that particular highway, and let me go ahead and be specific. The A block—and I just want to know the potential consequences of what happened in this auction on preexisting problems that we have out there. With the A block, Verizon won nine out of ten licenses. In the B block, AT&T won seven of the ten, Verizon the remaining three. In the C block, Verizon won the majority of those licenses.

I want to get to roaming charges and the potential impact on that, and I am going to read from what staff has prepared because they do a darn good job. "FCC recognized in August of 2007 that the ability for customers to roam automatically on the wireless cell phone networks of other carriers is necessary, desirable and in the public interest and therefore adopted a rule requiring all wireless carriers to provide automatic roaming service at just and reasonable rates upon reasonable request. However, the Commission carved out an extremely broad in-market exception. The in-market exception allows nationwide wireless providers to deny or cancel automatic roaming agreements with smaller or regional carriers in any area where a requesting carrier has license spectrum." So the question then comes to, will you be reviewing this exception, which I think that you should be with the potential impact or maybe the aggravation by the fact that the auction went a certain way because the way I see your exception right now, it seems that your rule was good and it is to provide automatic roaming service, but the way you have the exception is, in an unjust and unreasonable rate, even though it may be a reasonable request in certain areas of this country. So those are my three questions and I would appreciate your response.

Mr. MARTIN. Let me try to respond to all three of the questions, the second one first. Certainly all of our—I think the principles of the Commission do apply not only on the telecommunications side but on the wireless side as well.

Second, your first question about was the Commission surprised. Certainly I always thought, and all of the commissioners always did, that it is extremely difficult to ever talk about a new entrant being able to come in and build on a nationwide basis. All we could do in our auction was try to provide a framework that would allow it, a group of companies that were all advocating the potential for a new broadband entrant, a new wireless entrant on a nationwide basis to be able to come forward, so there were three conditions that they thought were necessary for the auction to have the possibility of having a new entrant to come in. They thought that they needed to have large blocks of spectrum, at least 11 MHz, be provided, that it needed to be provided in large regional licenses and that it needed to be capable of being combined into a nationwide footprint through combinatorial bidding. Several public interest groups also supported at least the concept of allowing for some of those conditions. They would have—the public interest groups would have advocated some wholesaling requirements as well. The Commission, while not adopting the wholesaling requirements, it did put in place the framework that had been advocated by those companies and those companies were a combination of technology companies like Intel and Google and also EchoStar and DirecTV. I would note that EchoStar did purchase almost a nationwide footprint. It was just in the E block so it was unpaired block so it is not capable of providing that kind of broadband service as easily. Some would argue with LTE technologies it will be able to even with a smaller footprint but in general it will be more difficult for it to. So I think that all we can do is try to put in place a framework that would allow for it but it was always going to be a daunting task.

The final question as it relates to roaming charges, the Commission actually is very sympathetic to making sure that smaller carriers are able to interact on a reasonable basis with the largest carriers where they don't have spectrum so that they are able to have reasonable roaming charges. The concern that you raised related to in-market exception goes to our concern with people holding spectrum and not building it out. What the Commission said is, you have to be able to negotiate with other carriers and have reasonable roaming charges unless of course it is an area where you have bought spectrum and you were supposed to have built out your own network, and in those areas where you are supposed to have built out your own network, it is more important that the emphasis is not on you riding on someone else's network but you using the spectrum that you bought to build out service to increase competition and increase that service to other people. So you can get roaming—there is a requirement that everyone has to interact on a reasonable basis for roaming everywhere except where you have purchased your own network, and where you have purchased your own network, your emphasis should first and foremost be on you building out yourself, and I think that that policy actually is one that fully recognizes both the importance of roaming but also the counterbalance of making sure that people that purchase spectrum are not letting it sit idle but rather are trying to build it out to the most effective possible use.

Mr. GONZALEZ. Mr. Chairman, I see that Commissioner Copps also——

Mr. COPPS. I just wanted to make——

Mr. GONZALEZ. Thirty-eight seconds, sir.

Mr. COPPS. I just wanted to make a quick comment. Thank you for raising this question of in-market roaming and I think the chairman is right where we were when we began consideration of that, but this has had unforeseen consequences, and you are right to raise that possibility and that is why I am pushing for a reconsideration of that in-market roaming exception.

Mr. GONZALEZ. Thank you very much.

Chairman Martin, the smaller carriers in my area haven't characterized it exactly as you have. I will go back with your exact testimony and we will have a discussion and then we will back in contact.

I yield back. Thank you very much, Mr. Chairman.

Mr. DOYLE [presiding]. The chair now recognizes Mr. Shimkus for 8 minutes.

Mr. SHIMKUS. Thank you, Mr. Chairman, and I apologize for not being here. The Science Committee invited me to listen to the FutureGen hearing. Of course, that is the clean coal power plant and I had to participate in that and just came straight down. For my colleagues that have had to wait, I apologize.

I would like to start with Chairman Martin, and a lot of people referred to the April 4 New York Times article, and in quotations, "Google's main goal was not to win but to make sure the reserve price was met so that openness conditions would become effective." In that same article, Google's telecommunications and media counsel, Richard Witt, stated, "Our primary goal was to trigger the openness condition." Based on that, do you believe Google was simply gaming the system and duping the Commission during the auction?

Mr. MARTIN. No, I don't, because I don't think that our goal was to actually—our goal in adopting the openness condition was not to prohibit someone else from winning but to actually have whoever won that spectrum have an open platform. It was not to try to prevent some of the people from—or at least my goal wasn't. You can ask the other commissioners. My goal was not to——

Mr. SHIMKUS. I don't think it is your goal I am asking you.

Mr. MARTIN. My goal was to make sure that whoever won the C block had an open platform.

Mr. SHIMKUS. Yes, I think the question is, what do you think Google's intention was? To really bid in an honest way or was it to push the price up to a level where then they would have a free access platform without having to pay for it?

Mr. MARTIN. I mean, you will have to ask them exactly. You will have to ask them what their goals were. But like I said, I think ours was a focus on openness, not just on whether or not——

Mr. SHIMKUS. No, I understand what yours is and I think part of this debate is, C block, D block, what is the return on investment, and even my friends on my side of the aisle have different views of whether this is helpful or harmful for deploying. I think it is harmful and I think the auction shows that it did not encourage a competitive bid. What it did was depress the bid, and I think Google tried to get access without having to pay for deployment, and I think most analysts, that is the lesson learned, and then the question is, where do we go from the lesson learned.

Commissioner McDowell, what impact did the various auction conditions have on smaller providers?

Mr. MCDOWELL. Well, as I said in my opening statement, I think it may have driven larger, more deep-pocketed players away from the encumbered C block into the unencumbered smaller blocks and driven up the price. Verizon got the C block for a song at 77 cents per megahertz pop. Some of these smaller blocks went for $2.67, or almost triple that amount, so I think that tells a lot of the story. Certainly there were a lot of smaller players who were able to walk away from this auction but I think we could have had a lot more without that encumbrance you gave the big carriers a home, the mid-sized carriers a home, and entrepreneurs and smaller players, give them a chance as well, through a variety of spectrum block sizes and market sizes.

Mr. SHIMKUS. So encumbering the C block based upon the open access restrictions really forced the bigger players into the other auctions which in essence they were able to use their market power to really defeat smaller bids?

Mr. MCDOWELL. I wouldn't say they used market power. I would say they used superior financial resources.

Mr. SHIMKUS. Right. That is right. That is a better word. But they were bigger, more powerful, and they had more money?

Mr. MCDOWELL. Well, because nobody was in the 700 MHz market before this auction so there is no market value——

Mr. SHIMKUS. That is right.

Mr. MCDOWELL [continuing]. For 700 MHz space yet so——

Mr. SHIMKUS. Let me continue then on, you have answered this, but imposing the open access conditions on the C block, did it achieve the stated goal of encouraging new entrants to build out a rival national wireless broadband network?

Mr. MCDOWELL. Well, I think the results really speak for themselves. I think what happened was, you had Verizon winning that for 77 cents, you know, a third of the price of some of the other blocks, and I am not sure that we can say that Verizon is a new entrant into the wireless base.

Mr. SHIMKUS. So in going back, obviously the focus is on C block right now. How does—Chairman Martin, how does the Commission intend to enforce the open access requirements on the C block? And a follow-up question is, also, do you believe that the open access requirements in the C block resulted in the sale below market value?

Mr. MARTIN. We intend to enforce the open access conditions by making sure that whoever wins the C block is going to be required to be open to any device and any application. I think if I was to respond in general to the concerns, as I said, if we had wanted to ensure that a new entrant won the C block, we should have prohibited the incumbent providers from winning there. Instead, I think what we were doing was ensuring that there would be an openness, a more open platform to wireless devices and applications, which I think we will enforce. I don't think that it meant that it was below fair market value. The 77 cents per megahertz pop that Commissioner McDowell was describing as a song is greater than anybody was willing to pay on a per megahertz pop in AWS auction. While it still—so while it was less than what was paid in the A and B block, it was definitely still more than what was paid in every other auction previous that the Commission had ever held. And finally, it is not true that small bidders were not able to win anything. Ninety-nine out of the 101 successful bidders actually were able to win 70 percent of the licenses, covering almost the entire country. In the A and B block alone, small providers won almost an entire nationwide footprint except for the top 20 markets. One of the maps that I showed in my testimony, in my opening testimony before, demonstrated that the rural providers and the small providers did not win—I mean did not lose, in rural America. Where they lost was in the top 20 cities in the country.

Mr. SHIMKUS. Let me finish with this because I have the first-line responders here. You all know I have been focused on emergency communications along with a lot of us on this committee, Anna Eshoo, Jane Harman, D block questions. There is a lot of us talking about how do we now get this right. If we want to have a D block and redo it, do a do-over or some saying if this is going to be a national asset, let us do it and let us use revenue to manage that so that we have the ability to communicate across the lines. I only have a minute left, so if we could go—I don't know what is appropriate. I guess Chairman Martin first and then—I don't know what is appropriate, to go in order of seniority, I guess. Could you give me a brief 20-second, 30-second analysis on what do we do with the D block?

Mr. MARTIN. I think that absent legislative changes that would provide the kind of resources that would be necessary for the public safety community to build out their own and have a network that is dedicated to public safety exclusively, I think that a public safety-private partnership is the only available tool for us to try to solve this problem.

Mr. COPPS. I think we proceed down the road we are on with the public safety-private sector partnership except now we need to frontload the process with the steps that I enumerated in my statement rather than coming in afterwards and after the auction and ratifying the conditions. Let us get it all out front so bidders, and everybody else, public safety knows where we are going.

Mr. SHIMKUS. Commissioner Adelstein?

Mr. ADELSTEIN. I think we need a top-to-bottom review and we need to really look at all aspects, and one aspect whether we could do that the way you suggested, just putting the money aside, but if Congress doesn't act, we discussed with Congressman Barton, we won't have the ability to direct those funds to public safety so the public-private partnership, we have to make it work. We have to make sure there is much more clarity up front and that both partners can win.

Mr. SHIMKUS. Commissioner Tate?

Ms. TATE. I am from Tennessee and so I would just say it can't be a pig in a poke and we are going to have to have a lot more clarity going forward, and I totally agree, if you all could pass the legislation, then we would certainly look at just auctioning it off.

Mr. SHIMKUS. Commissioner McDowell?

Mr. MCDOWELL. Real quickly, I think it is important to note that public safety has at its disposal about 97 MHz of spectrum, including 24 MHz that Congress authorized a few years ago. The Commission used its only tool in the toolbox, which was an additional 10 MHz to try to create a public-private partnership to be sort of the engine that pulls the train for that other 24. So a total of 34 MHz in just the 700 MHz neighborhood, which is fantastic spectrum. So absent any other congressional action, that is the only thing we can do. Otherwise we can't do anything else.

Mr. SHIMKUS. And Mr. Chairman, I will just end by thanking you for the time and just reiterate September 11, Katrina. This is something, public policy, we have to get right. We are going to be held accountable and we should be if we don't get this right, so thank you, Mr. Chairman.

Mr. DOYLE. I thank the gentleman.

The chair now recognizes Ms. Eshoo for 5 minutes.

Ms. ESHOO. Thank you, Mr. Chairman, and I think that this has been a worthwhile exchange, all the questions that the members are asking, and I am sorry I had to step out for a part of it but I do think that this is—it is a good exchange that we are having today. I have a couple of questions of Chairman Martin and one of Commissioner Copps.

I will start with Commissioner Copps. Thank you again for your extraordinary leadership in the public interest issues that relate to the FCC for the American people. I think that there are literally millions of people that are very, very grateful to you for your leadership in this area. In your testimony, you said that you believed that the public safety license has to at heart be a nonprofit operation. What kind of arrangements with the public safety licensee would you permit? Would there be any arrangements that you would prohibit?

Mr. COPPS. Well, first of all, thank you for your very generous comments, which are very much appreciated. I don't think we have an encyclopedic feel for that but there are just basic questions going in if we are going to be talking about keeping this nonprofit. Let us understand what the revenue flows are all about and what the revenue flows are going to be reflecting. Are they going to be reflecting the value of the spectrum or are they going to be reflecting rather just compensation for the expenses of public safety? Those are the types of questions that we really need clarity on. From the standpoint of prohibiting any action, I think probably that anybody who is in for profit-making purposes, probably shouldn't be directing the negotiations or acting as agent.

Ms. ESHOO. Thank you.

Chairman Martin, does the FCC have not only access to the expertise in house, I don't know, or through consultants that can analyze the failure of the D block auction? Are you planning to conduct a thorough analysis on proposed conditions? How are you going to go at this? Because there is something to be learned from it and we have to get the structure of this right in order to produce the outcomes that many members have described here today. You said in your testimony that there needs to be greater certainty in the process with respect to the D block and so I would like to hear from you how you are going to create this greater certainty. Are you going to specify the duties and the roles of the public safety licensee in greater detail? Can you enhance or bring some more light to how you envision what this process will be, the capability of the FCC to do this either internally or otherwise?

Mr. MARTIN. I think that the Commission does have the expertise to end up trying to address it.

Ms. ESHOO. So you plan to do this in-house?

Mr. MARTIN. Yes, I mean, with the Commission trying to end up assessing it and I think that will involve two steps. There were allegations as it related to the for-profit aspects of the nonprofit entity, that that was—there were allegations that that violated——

Ms. ESHOO. Do you think those are so? I mean, what is your opinion of that?

Mr. MARTIN. And so we—I have asked the inspector general to do an investigation to report to the Commission that they would make sure was available prior to us ending up voting or considering any further NPRM. So I think that is the first step, to just see if there were any violations of any rules that occurred. Irrespective of whether any violations occurred, I think that the more fundamental question that you asked is about should there be for-profit entities involved in the nonprofit. As I testified earlier, I certainly was surprised by that. I did not think that was what the Commissioner had envisioned, and I think that does not necessarily prevent compensation from flowing to public safety, as Commissioner Copps said. What it does is, it allows that potential compensation for use of their spectrum at times to be going to public safety purposes to help them reimburse their costs but it did not, I think, allow us or we were envisioned by that that some of that money would be going to for-profit-making companies, and I think that is what Commissioner Copps was alluding to in his testimony where he said fundamentally it all has to be for nonprofit purposes.

Ms. ESHOO. Commissioner Copps, do you want to add or do you want to say anything?

Mr. COPPS. No.

Mr. MARTIN. I think that when I talk about adding additional certainty and clarity and also reevaluating those conditions, I think that what we need to end up doing is talk about the very—some of the conditions that we impose like you have to build out to 99.3 percent of the population within 10 years and ask was that too burdensome and should we lower that. There are estimates that for every 1 percent of the population you add after about 95 to 95.5 percent of the population, you are adding $1 billion in costs, and were those costs just too great to reach over 99 percent. And then also when we talk about specifying ahead of time, yes, should we take away and not leave as much to the discretion of the public safety community to negotiate. The public safety community had actually advocated a more open process that would allow them to negotiate with the private sector for compensation for the use of their spectrum and some of that compensation in terms of financial support for buying radios and also in terms of build-out and the hardening of the system that would be necessary to serve public safety, not just commercial enterprise. I think we need to more adequately address those issues up front and clarify what those expectations are.

Ms. ESHOO. Thank you, Mr. Chairman, and thank you, Mr. Chairman.

Mr. DOYLE. The chair thanks the gentlelady.

The chair now recognizes my good friend, Mr. Pickering, for 5 minutes.

Mr. PICKERING. Mr. Chairman, thank you.

Chairman Martin, I want to commend and thank you. I do believe that the auction was a success, not perfect but very good, and if you look at historically high revenues, if you look at the participation of small and independent rural companies into the smaller markets, the build-out requirements, I do think that the open requirements will be very helpful in the long term for competition for consumers and for freedom. I think the regulatory signal that was sent on open access did lead to an adoption of a practice by Verizon and it was that regulatory signal that provided the clarity. I think that the open a—essentially requirements had some effect on the revenue but I think more importantly, and this is to Commissioners McDowell and Adelstein, the size of the C block market, could it have been broken down? You might have had a different outcome. But I do think overall it was good with the exception of the D block and what we all are very passionate and concerned about, and that is the public safety network. But it may be a blessing in disguise that the first time we didn't get it right, and I think we need to look at it that way, and Congress often passes something and most of it is good but we come back and constantly have to revise, modify, and perfect, and I think we should take a chance to look at it in that way. So how do we do the public safety, create the clarity, the certainty and, what I hope, would also promote competition at the same time with what is ahead of us.

A couple questions. One, would anybody support contracting out the public safety services versus having a public-private network and build-out?

Mr. MARTIN. I certainly think that, as I think all the Commissioners have said, everything should be considered as we go forward in this rulemaking, so I don't think that we would preclude it. I think the challenge is, if it was contracted out, how that would solve the interoperability issues. If it was contracted out to multiple providers, they might end up just replicating the same non-interoperable network today.

Mr. PICKERING. Is there a—and I want to come back to that. I know others, they want comment on the contracting. There has been talk of taking the proceeds and having a public safety-run operated built network. There is a middle ground, or a third way, and that is, to keep the public-private partnership, but instead of taking the proceeds and saying that it will be public safety, it could be used as a grant to public safety for buying the access to a commercial network or the devices so that you don't have to have a publicly owned and built, but you can still have the commercially owned and operated the profit incentive but guaranteed access to public safety of the D block. Would that be a—now, that would also take legislative action which creates the uncertainty long term but would that be something that the FCC and the Congress should consider jointly of giving the proceeds for public safety to buy access and devices that they need to perform their services?

Mr. MARTIN. Obviously I think that any and all options should be on the table for consideration, and if Congress passed that kind of legislation, we would follow it. I think the concern with that approach in the past has been that actually Congress has provided legislatively grants to solve this problem several times and the amount of money you would be able to potentially raise in the D block would probably be around the same amount that Congress has already provided grants in the past and they have been unable to solve this problem, at least from public safety's perspective, because the grants on the localized basis alone and purchasing capacity from others or trying to buy, you know, patches that would allow for a kind of interoperability but not true interoperability have not—will not solve the public safety interoperability challenge like a network on its own would. So I think that the concern that public safety has raised with the grant aspect in the past has been that grants going out to local communities has the potential to just replicate the current problems we have.

Mr. COPPS. I guess my concern there would be public safety's ability to get the access that it needs and to have an equal negotiating stance with whoever the commercial provider is, number one, and number two, what are they getting access to? Is it a regular commercial network or is it a public safety network with the robustness and redundancy and everything that it has to have, which goes beyond the normal commercial network.

Mr. PICKERING. My time is running out. Let me get to one other troubling outcome. Seventeen out of the top 25 markets now, where there is—the top two incumbents control over 95 MHz in each of those 17 out of the top 25 markets. Now, that is above the threshold that was adopted by the FCC in the AT&T and Dobson merger. So if it was reasonably adopted in that merger, it seems like that is kind of an antitrust competitive threshold. Is the Commission concerned that we now have a concentration through auction purchases and should we as a result adopt a requirement that the D block be auctioned to non-dominant providers instead of someone that is already over what is considered an antitrust or anti-competitive threshold of 95 MHz in a given market, Chairman Martin?

Mr. MARTIN. As I said, I think that all options should be on the table for us to consider including whether or not there should be any kind of restrictions in light of what had occurred in the rest of the 700 and I would say that the 95 percent threshold that we use in the context of previous mergers triggers a more-intensive scrutiny of those markets. So in the markets in which any carrier exceeds the 95 MHz, then what we do is actually look at the competitive impact and antitrust analysis that occurs there, and to the extent that is necessary require a divestiture to get back below the 95 percent threshold. In many of the 17 markets, the carriers are just above that 95 percent and I think that in Verizon and AT&T's instance, many times they are still in the 90s, so it would be relatively small amounts of spectrum they would end up having to divest to get back below that threshold and they would be able to divest any of the spectrum that they have there. But the Commission wanted to go to that kind of an analysis to the extent that people raise that issue in the licensing context just like we do in any licensing.

Mr. PICKERING. But in an auction policy, should we try to keep further consolidation above that 95——

Mr. MARTIN. I certainly think that that is a—it should be an important component but I do think that in the past the Commission has been hesitant in the auction to pick winners and losers, and what you are really talking about is picking losers, saying certain people are prohibited from participating and I think that always gives me pause, but maybe that is appropriate in light of the success that they had.

Mr. PICKERING. Thank you, Mr. Chairman.

Mr. DOYLE. The chair thanks the gentleman.

The chair now recognizes the gentleman from Michigan, Mr. Stupak, for 8 minutes.

Mr. STUPAK. Thank you, Mr. Chairman.

Mr. Chairman Martin, in response to the last question, I was going to ask the same question, and in looking at the top 50 CMAs, you have at least 10 of them that are around 119, 124, 111, 114, 119, 109, another one 119. Is the Commission going to take a closer look at this to make sure that there is not a monopoly here?

Mr. MARTIN. Sure. I think the Commission always does whenever we are undergoing our licensing, to make sure that when you cross that 95 MHz threshold, that there is still an adequate level of competition by other providers, and if not, requiring any subsequent action. But I do think that you do have to apply that in context and then when you go above that it does not mean that the Commission's precedent says you automatically have to sell. What it does is, we then do an antitrust analysis on that individual market.

Mr. STUPAK. Was any consideration given to that before you did this auction, that someone would be going over? Because isn't it hard to divest once you have already 124 percent of the market share?

Mr. MARTIN. Again, it is not 124 percent of the market.

Mr. STUPAK. I know it is not 124 percent.

Mr. MARTIN. It is 124 MHz, and that I think was in just one market. There were several of those that were over 100. Most of the 17 that were identified were actually in the 90s but there were a few over 100. But as I said, I think that the alternative challenge is to prohibit people from participating in the auction up front and I think that that is actually potentially more damaging or more difficult. It might be something that the Commission should consider in light of where we already are in terms of consolidation of the D block.

Mr. STUPAK. All right. So you said should consider. Are you going to or not? Because my concern is, you know, you have the media ownership that this Congress wasn't in favor of but sort of just pushed this thing through and now we have some companies over 95 MHz and it is there for a reason. Are you going to do something? I mean, I am rather concerned about this, and as Mr. Pickering indicated, he is too.

Mr. MARTIN. I think that—as I said, I don't think the Commission has figured out what we should end up doing with the D block, whether or not we would prohibit any of the large incumbent providers from participating. I think the Commission hasn't spoken to that yet but I think that will be a part of the record in front of us in deciding what to do on the D block.

Mr. STUPAK. Commissioner Copps?

Mr. COPPS. I just wanted to make one quick point and that is that that 95 percent screen is a relatively recent vintage. It was 70 MHz and I protested going to the 95 percent, or 95 percent MHz. There is no question that with the evolution of the market you have to go up but we went up pretty far and I think we even did so on the presumption that we were including the AWS and the 700 MHz auction, which is nowhere near being utilized.

Mr. STUPAK. Mr. Chairman, let me ask you this. Do you think that the FCC should take a larger role in being an honest broker with the industry in the next D block auction?

Mr. MARTIN. The larger role as being the honest broker?

Mr. STUPAK. Honest broker, right. Commissioner Copps mentioned that in his testimony, and——

Mr. MARTIN. I think obviously the Commission has to take a larger role. I think that the Commission had tried to end up taking a very large role previously but obviously we didn't define those roles clearly enough, but I worked with Commissioner Copps on doing that before and I will continue to make sure that we are trying to be an honest broker.

Mr. STUPAK. Does the FCC have an economic analysis to estimate what it would cost to build out the nationwide private-public network?

Mr. MARTIN. I think that the estimates that have come in from the public safety side have been somewhere around $6 billion or $7 billion.

Mr. STUPAK. Right, but do you have an economic analysis on what——

Mr. MARTIN. I don't think ours would be anything different than that.

Mr. STUPAK. Don't you think it would help to provide information to the industry that would inevitably help them with this idea of building out? I mean, you are asking them to bid but it is sort of guesswork. Wouldn't you want an economic analysis on what the model should look like, where we are going with this? Wouldn't it help out the industry in trying to make this public-private partnership work?

Mr. MARTIN. I am not sure that the Commission will be able to provide a more detailed analysis than the industry itself could end up providing on how much it costs to actually build out a network. We certainly could end up evaluating it but I don't think there has been anybody who has put anything on the record that disputes that a public safety network that would have to reach at least 99.3 percent of the population and be something that would be more hardened or have more duplicative resources or facilities so that it would be able to withstand a national security emergency, I am not sure that that wouldn't mean that that is not a fair estimate of how much it would cost.

Mr. STUPAK. Commissioner Copps, it looks like you want to join in.

Mr. COPPS. We have to have the capability to make that judgment and yes, we are going to get a lot of information from industry but we can't always be relying on industry projections. We have to have the capacity to make our own economic analysis, and I don't want to pour cold water on this idea of building this network but I would be frankly amazed if this system could be built for $5 or $6 billion. If somebody told me that today, I would say let us buy it.

Mr. STUPAK. I think the Administration actually had an estimate one time of $18 billion, if I remember, because I have been pushing this for a long time with my law enforcement background, and even underneath this plan it is going to take, what, a 10-year plan for

99.3 percent coverage. Ten years, in my estimation, is too long. We have been talking about this since the Air Florida crash in, what, 1978. I don't see us going very far.

Mr. Chairman, let me ask you this. You stated that the Commission is considering whether the demands on the D block were reasonable. You specifically raised the concern on whether the build-out plans were too ambitious. How is the Commissioner then going to determine if changes are needed to build out the plan?

Mr. MARTIN. I think that what we are trying to end up determining, when we go through a rulemaking proceeding like this, what we would do is, is ask that very question and ask parties, both public safety and private sector, to come in and comment and say that we estimated that reaching 99.3 percent of the population was reasonable and that this was the estimates of how much it would cost and ask for the private sector and the public safety sector to come in and both comment on the reasonableness of the assumption that 99.3 percent of the population needed to be reached and how much that would cost. So I think that is the process which we always undergo when we are trying to make a decision.

Mr. STUPAK. Maybe I should ask it this way. What are the factors you are going to have to judge the reasonableness of the plan and the build-out, I guess, is a better way to say it.

Mr. MARTIN. Sure. The factors when you are trying to end up judging the reasonableness of that is, how much extra does it cost to gain each, for example, additional percentage in population and then what is a reasonable amount that you could expect of someone on the private side to be willing to engage in if it was necessary they were going to have to reach this percentage of the population. So in other words, if some estimates have been that it costs about an extra $1 billion for every additional percentage over 95 percent, is that accurate? And if that is accurate, would it have made a difference for someone being willing to bid if we had lowered it from 99 to 98 percent, and would that extra $1 billion have been the difference in someone bidding or not.

Mr. STUPAK. But doesn't your answer just really beg for the FCC then to have an economic analysis on their own to make those judgments as to the reasonableness?

Mr. MARTIN. I don't think it is that we won't have people evaluating that at the Commission staff and doing an economic analysis to try to assess that but the first step in that is actually for asking for the public to come in and give us their best estimate. We will do an analysis of what they put forth. I don't mean to suggest we won't. And as a part of that, I think we will do our best to try to estimate that. I mean, the Commission's economists build models to try to determine how much things cost to build out and try to do an estimate of that to estimate the comments that are filed and their own estimates but I think that that is guessing with the inputs that are provided by the private sector.

Mr. STUPAK. Let me ask you this then. My time is up. Would requesting federal appropriations to assist in funding the build-out of the D block network be considered in your review as how to proceed with the re-auctioning of the D block?

Mr. MARTIN. I think so. I mean, I think I actually had reference to a bill earlier today where I had said that the legislation had been introduced, for example, but had said that all of the proceeds, I think your bill had said over $11 billion over the CBO's estimate should be provided to public safety, the public safety network, and then 50 percent of the auction proceeds on a going forward basis until they have been able to build it out. I think that the Commission has all said they would support an effort to try to provide public safety direct resources to build out their network but in the absence of—what we are talking about is in the absence of that legislation, is there anything we can end up doing. But I don't—I think the Commission would already say we support that.

Mr. DOYLE. The gentleman's time is expired. The chair now recognizes the gentlelady from California, Ms. Harman, for 5 minutes.

Ms. HARMAN. Thank you, Mr. Chairman, and thank you to our witnesses. I think the hearing record after 2½ hours is a pretty good record and I would just like to draw you out on some of the points I made in my statement and in the letter that I sent to the chairman and the ranking member.

First of all, I have stated that to me, building a national broadband network for interoperable communications is the primary goal of the DTV transition. Does anyone disagree with that? OK. So you all agree with that.

Second, I talked about three things that I at least believe in with respect to redo of the D block auction. I think we should do a redo. All of you already answered that question when Chairman Dingell asked you, but my three conditions were clarity, transparency and avoiding D block light. Let me ask you first about clarity. What I meant by that is that the FCC and the Public Safety Spectrum Trust, assuming we still have one, must give bidders a sense of what their obligations are before the auction. Could we just go down the line and see whether you agree with that? Let us just start at one end with you, Commissioner Adelstein.

Mr. ADELSTEIN. Oh, absolutely. I think there needs to be more clarity. A lot of the problems we have heard have arisen from the lack of clarity the last time.

Ms. HARMAN. Commissioner Copps?

Mr. COPPS. It took me five points in my statement to get to the three points that you more succinctly wrapped it up with.

Ms. HARMAN. Thank you.

Mr. MARTIN. Yes, I think there needs to be more clarity.

Ms. HARMAN. Commissioner Tate?

Ms. TATE. Yes.

Ms. MCDOWELL. Clarity is good.

Ms. HARMAN. Second, transparency. We have had some conversation here about whether there should be a for-profit or a not-for-profit entity helping out the public safety trust. My point is, whatever we have, there should be absolute transparency so that bidders understand up front what is going on and oh, by the way, the rest of us understand it too. Views on transparency, Commissioner Adelstein?

Mr. ADELSTEIN. Absolutely. The need for transparency is clear, to paraphrase a——

Ms. HARMAN. Commissioner Copps?

Mr. COPPS. Ditto.

Ms. HARMAN. Chairman Martin?

Mr. MARTIN. I think that transparency is helpful.

Ms. HARMAN. Commissioner Tate?

Ms. TATE. Crystal clear.

Ms. HARMAN. Commissioner McDowell?

Mr. MCDOWELL. Transparency.

Ms. HARMAN. Boy, I wish Congress worked like this.

Third, avoiding D block light, at least avoiding a second auction that doesn't correct the problems of the first, and I said we should act with urgency informed by what caused the first auction to fail. Anyone disagree with that? Commissioner Adelstein?

Mr. ADELSTEIN. I think we have to look at this fundamentally and make major restructuring.

Ms. HARMAN. Do you want to say any more about—I guess you have said that before but——

Mr. ADELSTEIN. Yes, I have. I think there is all kinds of requirements we put on that were unrealistic that made it impossible for a private partner to join us.

Ms. HARMAN. So what would be your number one correction?

Mr. ADELSTEIN. Well, you know, I think we have to look at the reserve price. First of all, we have already met the numbers so we don't want to enrich the Treasury at the expense of public safety. Let us use those funds rather than having a high auction price to build out the network. Allow the private partner to build it out. I think the penalties were unreasonable and scared away private capital. Again, that is not good. Getting everything up front rather than doing it afterwards so that the private partner knows going in what the expectations are is also crucial.

Ms. HARMAN. Thank you.

Commissioner Copps?

Mr. COPPS. I think we are going to have to be very vigilant to avoid an outcome that is D block light. I think there is going to be inevitable pressure, let us just get this done, let us ease up this a little bit, ease up that a little bit and we should not be in the boat of sacrificing away any of the truly essential public safety safeguards that we need to have.

Ms. HARMAN. Thank you.

Chairman Martin?

Mr. MARTIN. I don't think that we should end up sacrificing the essentials that public safety needs to have but I also—I am not also sure that just lowering the reserve price would resolve the issues. I am concerned that I think even the one bid that was placed may have been just placed with parking money before they bid elsewhere so I am not sure that that alone would end up resolving our problem, so I think we do have to assess the underlying requirements.

Ms. HARMAN. Well, I am not advocating just lowering the bid price either.

Commissioner Tate?

Ms. TATE. Well, obviously people need to know the scope of the work and this goes back to your point about, we need to know exactly what it is that we are trying to build, and I don't necessarily think it is just about the reserve price either. I mean, the devil is in the details and we need to get all those out and have them be transparent.

Ms. HARMAN. Thank you.

Commissioner McDowell?

Mr. MCDOWELL. I think it is going to be very important to get all the parties in the room at the same time, find out from the private sector what it was that deterred them exactly. The last time public safety had the majority of the say in this. Let us let the private sector have a say and see if we can come to an accommodation.

Ms. HARMAN. Well, I wish things were as easy all the time. Let me just add in my 2 seconds my skepticism about a regional approach. What I worry about is, some regions will end up doing well and some won't and at least based on my in-depth briefings on a regular basis about the terror threats against us, I can imagine serious terrorist attacks in parts of the country that under a regional approach might not be adequately protected or might not be able to connect in to the rest of the country, and if we have near-simultaneous attacks, I think our country is at risk unless we have a national approach.

Thank you, Mr. Chairman.

Mr. DOYLE. The chair thanks the gentlelady.

The chair now recognizes Mr. Inslee for 8 minutes.

Mr. INSLEE. Thank you.

I want to ask about the open devices proposal, and I would like to ask how you intend to implement this as far as rulemaking or discussions with the industry or how do we intend to actually enforce and apply in the real world this open appliance standard. That is an open question. Maybe we can start with Chairman Martin.

Mr. MARTIN. Well, I think that we should both work with the winning provider and also the people who had raised that as an issue from the technology industry to make sure we are establishing a process that will allow for people to be able to build devices and applications that can work on that network. I think that Verizon has already taken steps to have—they had their first openness conference right after the auction and results were announced in which they were going to begin that process of providing the specifications for how their network would work on a going forward basis and I think the Commission needs to hear from the industry how they think that process is going.

Mr. INSLEE. Will there be a formal rulemaking or a formal rule promulgated, or how will the public weigh in to make the good intentions of the open appliances in fact are effectuated?

Mr. MARTIN. I think that we need to end up hearing from the folks on the manufacturing and the technology side on how they think we should end up going forward on that basis and I think they are probably trying to assess Verizon's steps thus far in the conferences that they have had but I think that rulemaking may be the most appropriate means of doing that but I think both the industry—the industry, both sides, Verizon as the carrier who won and also some of those that are most concerned about the open access provisions are probably trying to assess what they think of Verizon's steps thus far, and I think that they will inform what they will advocate that we do as well.

Mr. INSLEE. So would it be a voluntary or a mandatory system?

Mr. MARTIN. Oh, no, it is a mandatory system but there are times when the Commission has very simple directives that we enforce through people who file complaints. So it is not that—I want to be clear. It is not that it is not—it is not that it would not—it is not a mandatory requirement. The question of whether we need to adopt additional rules to flesh out how the requirement says any handset and any device—any handset needs to be able to work on the network and any application needs to be able to flow through to that consumer, whether we need additional rules to enforce that is what you were talking about, but absolutely, it is a mandatory requirement already.

Mr. INSLEE. And how would we assure that the consumers in the public would have input into that decision one way or another?

Mr. MARTIN. I think that both the public and the technology sector that has been more concerned about this would both have input in the Commission's decision of whether we need to have an additional rulemaking or not. Oftentimes the Commission starts a rulemaking process by someone filing a petition that says to the Commission, hey, you need to do another rulemaking to flesh out your rules in this area because they are not clear enough. So if anybody does, we would obviously respond to it, and if not, I think we will still be trying to meet with the industry and with consumer groups to understand their perspective on it.

Mr. INSLEE. Mr. Copps?

Mr. COPPS. You know, anybody can bring a complaint to the Commission and we need to advertise that and do some outreach, and we have a 6-month enforcement process that we have so I think that is good, but I think the first step is really fleshing out, and maybe you can help us today with the second panel on what the companies mean by these commitments that they have made with regard to open access, and if they are fine, that is fine, but if there is something lacking, then I think it becomes incumbent upon the Commission to define with a little more clarity exactly what we mean by open access so that all the world can know that and you have some standards and people know when they bring their complaint process what standards are going to be used.

Mr. INSLEE. Well, we certainly encourage an open discussion of this. The intentions are great but, of course, we have got to see to it that the intentions are fulfilled in the real world and I suspect there might be some pretty technical issues involved in this in really describing what the industry's responsibility is here, and I do hope the Commission will do a better job in listening to the public than it did in the media consolidation issue.

This is kind of old business, but I did receive Commissioner Martin's response to my question as to when he had submitted an op-ed in relationship to when the rule came out on consolidation, and we will put that into the record. It doesn't shine well for the Commission. We hope they will do a better job in listening to the public as we go forward on this, which I do applaud that we are moving at least in this direction. Thank you.

Mr. DOYLE. The chair now recognizes the gentleman from New York, Mr. Engel, for 5 minutes.

Mr. ENGEL. Thank you, Mr. Chairman. You know, we keep talking about C blocks and D blocks. I keep thinking of a federal penitentiary or something.

Chairman Martin, in your statement, you said that the open access requirements on the C block offered consumers added benefits. Let me ask you, why did you choose to only place these requirements on the C block and not the others?

Mr. MARTIN. I thought that it was important to try to respond to the concerns that had been raised about the ability for people that were innovating on the edges of the network to be able to get those devices and applications onto the wireless networks. I was hesitant, however, to impose that kind of a condition across the board without understanding what the full implications would end up being so I thought that it was appropriate that we try to do that on one particular block and I thought the C block was the block that was most likely to still be able to sustain that condition and get someone willing to build out.

Mr. ENGEL. Well, let me ask you this. Do you plan to have similar requirements instituted for future spectrum auctions or was this a one-time event?

Mr. MARTIN. I think that it was—I think that obviously whether or not we will do it in the future depends in part upon the industry's reaction. Our hope was that this would actually spur and have a ripple effect throughout the industry to have a more openness approach to more platforms that are move open to devices and applications. I think that we begun to see some of those steps and I think we will have to wait and see what the continuing ramifications are in the industry.

Mr. ENGEL. Like Ms. Harman, one of my biggest priorities to help facilitate an interoperable communications network that all of the first responders can use. Obviously, coming from New York, it is even more important to me. I would like to know, let me ask everybody, I will start with the chairman, what your suggestions are on how we can have a more successful auction next time around because obviously if we don't change the rules, we won't see much, if any, additional bidding. So I wonder if Chairman Martin could answer that and anybody else who would care to?

Mr. MARTIN. I do think that we need to provide more certainty as to what the obligations will end up being for whoever wins that, and I think that we had left too much up to a negotiation that would occur between the public safety entity and the ultimate winner. The public safety community had advocated that initially but obviously I think we need to put the exact parameters around what the expectations will be.

Mr. ENGEL. Anybody else?

Mr. COPPS. It is the clarity and the certainty that Ms. Harman talked about and making sure we have the expertise, and I mean really incredible expertise, making sure public safety has the best and the brightest working for it, and I think that is the way to proceed.

Mr. ADELSTEIN. Just to provide some clarity to the committee, I have come up with a lot of detailed suggestions in my testimony but the big picture here is that all we have to offer to the private sector is the ability to use 10 MHz sometimes, and that is not necessarily all that valuable because the private partner also has to give up use of its spectrum when public safety needs it. So what we are trying to leverage here isn't an inexhaustible resource. We don't have the ability to demand a gold-plated network for public safety because no private partner in their right mind would be willing to put up that level of resources in exchange for that limited amount of spectrum that is conditioned in its use. So we have to achieve a balance, knowing what the limitations of what we are offering to the private partner are if we want to make a public-private partnership work. Clearly in the last round we put so many requirements, and all well intentioned, in order to help public safety, that private partners ran away. Wall Street said we are not going to finance that because there is too much open-ended liability, we don't know what the details are. As a matter of fact, the penalty provisions were so severe that there could have been $1 billion lost by private capital trying to do the right thing working with them the way that our rules work. So we have to really come up with a balance. We have to work with both sides and make sure it works for public safety because otherwise it is not worth doing at all but also make sure it works for a private partner as well and that balance, given the demands of public safety, is going to be difficult to achieve when you think about the limited leverage that we actually have.

Ms. TATE. I think it is not just tweaking one or two issues, like the reserve price, and it is not just D block light, as Congresswoman Harman said, but you all have the opportunity to hear from, you know, some incredible panelists about what all the options may be.

Mr. MCDOWELL. And Congressman, I will incorporate by reference all the wise statements of my colleagues but also I think it is important for Congress to understand, there are two jurisdictions in the country that already have an interoperable network in their regions and that is New York City and Washington, D.C. So those networks would run on different technologies and different standards and will also have to be plugged into this nationwide interoperable network and that is going to be an added wrinkle to all of this.

Mr. ENGEL. Thank you.

In my last 15 seconds, let me also add my voice to the question that I think Mr. Shimkus asked, and that was the report in the New York Times about Google's goal in bidding for the C block was to trigger the reserve price for the open access rule to come into effect. I really am concerned about it if indeed that was the case and just wanted to add to what Mr. Shimkus said. I know, Chairman Martin, you had answered him. I don't know if there is anything else you want to say about it. OK.

Thank you, Mr. Chairman.

Mr. MARKEY. The gentleman's time has expired.

Let me just ask you one final question, Chairman. Going forward, are you also open to looking at the wireless roaming ability of regional players who won't have fully built-out networks on day one or in all areas and need to provide service to compete effectively against national carriers?

Mr. MARTIN. Sure, I am open to it, but I do want to make sure that we are not undermining their incentives and/or requirements that they build out their networks as well.

Mr. MARKEY. And much of the AWS spectrum is still unencumbered by government users so this is an ongoing issue and do you all agree with the——

Mr. MARTIN. Oh, sure. Obviously if they have a license that they are not able to be building out on, that is a significant different story. What we were concerned about was the people who had licenses who had not built out but were trying to take advantage of roaming on someone else's, but if they have got a license but they have not built out, that is certainly a different—that is a different exception.

Mr. MARKEY. OK. Great. Well, again, I want to commend the Commission for the open devices and open applications conditions on the C block. I think that is working out well so far, and I think it has really changed the dynamic out in the marketplace. The auction is moving industry along and I believe if implemented correctly and enforced fully will unleash billions and billions of dollars of investment and give more choices to consumers across the country. I want to commend Verizon as well for moving to embrace it and the auction. I think that is an important step.

And clearly what we hear from every member today is that public safety is issue number one. So we are not debating over public safety here. That is not a debate in our committee. We are now debating over—well, my mother used to say—she would first say, Eddie, your father and I are going to donate your brain to Harvard Medical School as a completely unused human organ, and that would be immediately before she would say, you have to learn how to work smarter, not harder. So that is our goal. We have multiple objectives that we can achieve here but we have to be very smart, and if we do it and deal with the reality of what is left over after the completion of the rest of this auction, then I think we can accomplish it.

And with that, and with the thanks of the Committee, we thank you for your testimony and we would like to continue to work closely with you towards the formulation of a policy here that finishes off this auction in a way that achieves those goals. Thank you so much for being here.

And then we would ask our second very distinguished panel to move up to where their name cards will be placed over the next minute or so.

Ladies and gentlemen, thank you so much and we thank everybody for your patience. This subject merits the quality of the panel which has been assembled to discuss it, and there has never been a more distinguished panel assembled before the Telecommunications Subcommittee in my 32 years here, and I just want to thank all of you for being here and the magnitude of the problem I think is matched by the expertise of the witnesses, and I very much appreciate your attendance.

We are going to begin by hearing from Chief Harlin McEwen, who is the chairman and interim chief executive officer of the Public Safety Spectrum Trust Corporation. He has nearly 5 decades of experience as both an advocate for public safety communications issues and as a career law enforcement officer and administrator. Mr. McEwen, we welcome you, and whenever you are ready. Each of you will have 5 minutes, and please try to keep it to 5 minutes because it will otherwise make it very difficult for the members to get a chance to ask questions.

So we will recognize you first, Mr. McEwen. Whenever you are ready, please begin.

STATEMENT OF HARLIN R. MCEWEN, CHAIRMAN AND CEO, PUBLIC SAFETY SPECTRUM TRUST

Mr. MCEWEN. Thank you, Chairman Markey and members of the Committee for this opportunity to appear before you today. As you said, my name is Harlin McEwen and I am the retired police chief for the city of Ithaca, New York, and I am retired as a deputy assistant director of the Federal Bureau of Investigation here in Washington. I also serve as the chairman of the Communications and Technology Committee of the International Association of Chiefs of Police, a position I have held for almost 30 years.

Most recently, I was honored to have been elected as chairman of the board of directors of the Public Safety Spectrum Trust, and the board has also named me as the interim chief executive officer. The Public Safety Spectrum Trust is a nonprofit corporation. Its purpose is to serve as licensee for the 700 MHz radio spectrum allocated by the FCC for public safety broadband purposes. The public safety broadband license was granted to the PSST by the FCC on November 19, 2007. The 10 MHz of public safety broadband spectrum is intended to be one-half of the spectrum that will be used to develop a shared commercial public safety network. The other half of the spectrum will come from the so-called D block. I and other members of the board of directors of the PSST take our duty very seriously and I appear today on behalf of not only the PSST but also the local, tribal, State and Federal public safety community that we serve.

First, I am sure each of you knows why having a national public safety broadband network is so important and we applaud the efforts of the committee members and other Members of Congress for your support in the creation of this network. Any review of major crisis such as 9/11 or Katrina shows how much the personal efforts and effectiveness of our Nation's first responders, the police, firefighters, emergency medical personnel and others, are undermined when the communications infrastructure that supports our efforts fails or is insufficient for the needs of public safety professionals. We need to move to broadband technology but we also need a network that for public safety is more reliable than today's commercial networks, hardened to withstand catastrophes like Katrina, that has extended backup power, priority for public safety, enhanced security features, and a satellite component that does not exist in the current commercial networks. Establishing and building out the public safety broadband network will be a significant challenge but it is one that very much needs to be done to meet our national security and public safety needs for the years to come.

We were deeply disappointed that the D block did not attract a winning bid in the recently concluded 700 MHz auction but the PSST is committed to working with the FCC to develop the rules for a follow-on D block auction that will result in a winning bidder and also meet the critical communications needs of the public safety community. We welcome any suggestions from Congress and the members of this committee to help us ensure that failure is not an option in a D block re-auction.

The FCC's Second Report and Order assigns important tasks to the PSST as the Public Safety Broadband Licensee to ensure that the needs of first responders are met. These tasks include working with the D block winner to develop and construct a network that meets public safety's critical communications needs at the outset over the entire term of the 10-year license and into the future. Public safety's needs and technology available to meet those needs will not remain static. There will be a continuing need for input from the public safety community with regard to network upgrades being implemented by the commercial operator. We see the PSST in a continuing role as the public safety representative in these matters.

The responsibilities expected of the PSST have not been matched by an appropriate source of funding. The FCC order did not and could not provide funding for the Public Safety Broadband Licensee. There is no allocation in existing law nor in pending legislation for the funding to meet the PSST's needs. In the total absence of conventional funding alternatives, the PSST has suggested that the commercial D block operator be the principal source of funding through some type of lease as is set forth in the FCC Report and Order.

In conclusion, we in the public safety community wish to applaud the efforts of the FCC as reaffirmed in their testimony this morning of the members of this committee and of Congress for their support of the public safety broadband network and the public-private partnership approach. We look forward to working with this committee to make the public safety broadband network a reality in the near future. You can count on us for flexibility, focus on solutions and dedication to our one goal: an effective broadband communications network available to meet the needs of public safety in providing critical first responder services to our Nation.

Thank you very much.

[The prepared statement of Mr. McEwen follows:]

WRITTEN TESTIMONY OF

Chief Harlin R. McEwen

Chairman and Chief Executive Officer,
Public Safety Spectrum Trust Corporation

Chairman, Communications & Technology Committee
International Association of Chiefs of Police (IACP)

Before the

SUBCOMMITTEE ON TELECOMMUNICATIONS AND THE INTERNET
COMMITTEE ON ENERGY AND COMMERCE
UNITED STATES HOUSE OF REPRESENTATIVES

April 15, 2008

HOW TO DRAMATICALLY IMPROVE PUBLIC SAFETY COMMUNICATIONS THE D BLOCK SOLUTION

A Viable Path to a Shared Broadband Network for Public Safety and Commercial Users

Thank you, Chairman Markey, Ranking Member Stearns and distinguished Members of the Committee for the opportunity to appear before you today.

My name is Harlin McEwen. I have dedicated nearly 50 years of my life to public safety, most of that in law enforcement. I am the retired Police Chief for the City of Ithaca, New York, and am also retired as a Deputy Assistant Director of the Federal Bureau of Investigation in Washington, DC. I serve as Chairman of the Communications and Technology Committee of the International Association of Chiefs of Police (IACP), a position I have held for almost 30 years.

Most recently, I am honored to have been elected to be Chairman, and also to serve as the interim Chief Executive Officer, of the Public Safety Spectrum Trust Corporation (PSST), a non-profit corporation formed under the laws of the District of Columbia. The principal purpose of the PSST is to serve as licensee for the 700 MHz nationwide Public Safety Broadband License (PSBL), which was granted to the PSST by the Federal Communications Commission (FCC) on November 19, 2007. The PSBL is for the 10 MHz of radio spectrum in the 700 MHz band that has been allocated by the FCC for public safety broadband purposes and is intended to be one half of the spectrum that will be used to develop a shared commercial/public safety network. The other half of the spectrum will come from the so-called D Block. The PSST is a non-profit organization whose mission is to serve the local, state and federal public safety community. I and the other members of the Board of Directors of the PSST take this duty very seriously, and I appear today on behalf of not only the PSST, but also the public safety community we serve.

First, I am sure each of you knows why having a national public safety broadband network is so important, and we applaud the efforts of the FCC to support the creation of this network. Any review of major crises such as 911 or Katrina shows how much the personal efforts and effectiveness of our nation's first responders – police, firefighters, emergency medical personnel, and others - are diminished or undermined when the communications infrastructure that supports our efforts fails or is insufficient for the needs of the public safety professionals. Like all users, we need to move to broadband technology, but we also need a network that is hardened to withstand catastrophes, that has power support for individual communications sites, satellite back-up and other important features so that it will be available and reliable in a crisis. We also need a network that uses one common technology standard so the dozens of separate groups making up our nation's first responders in any area can communicate with each other. This requires that the public safety community, whether local, regional or national, be on the same frequency, using the same network. Establishing and building out the public safety broadband network will be a significant challenge, but it is one that very much needs to be done to meet our national security and public safety needs for the years to come.

We were deeply disappointed that the D Block did not attract a winning bid in the recently concluded 700 MHz auction. We had hoped by this time to be in the midst of the negotiation of a Network Sharing Agreement (NSA) with the winning D Block bidder. Instead, we find ourselves in the midst of working towards a re-auction of the D Block spectrum, trying to find the approach that will enable the auction to be successful and also preserve requirements that will result in a network designed to deliver genuinely needed up-to-date, affordable and interoperable broadband communications capabilities to our country's first responders. The PSST plans to work with the FCC as the FCC develops the rules for a follow-on D Block auction that will result in a winning bidder and also meet the critical communications needs of the public safety community. The PSST intends to take advantage of the opportunity offered by the new auction to continue to make information available, to engage in a dialogue with interested bidders, and to make sure its goals are consistent with the public policy objectives of Congress and the FCC.

We cannot let this auction fail. If it does, then the individual federal, state and/or local government agencies will be the only remaining source of the substantial funding needed to construct and operate a modern, dedicated, nationwide broadband communications network for public safety use. In today's fiscal climate, that would likely pose insurmountable challenges. I respectfully ask the members of this Committee to help us ensure that failure is not an option in a D Block re-auction.

As you well know, the recent 700 MHz auction far exceeded expectations in terms of revenue raised, netting nearly $20 billion for the Treasury, well above the $10.2 billion revenue target reflected in the Deficit Reduction Act of 2005. That performance should set to rest concerns regarding the possible undesirable budgetary impacts that could be associated with setting aside spectrum to craft a solution for public safety's critical communications needs.

We in the public safety community have come a long way in the past few years – with the help of the FCC and many of you here in Congress – to be in a position to play a constructive role in crafting a viable solution to our long-standing mobile communications problems. We have embraced the concept of sharing the use of spectrum, and sharing a network, with a commercial provider, with the understanding as set forth in the FCC's order that public safety portions of the network will be under public safety's control.

The FCC's Second Report and Order assigns important tasks to the PSST as the public safety broadband licensee to ensure that the needs of first responders are met. These tasks include working with the D block winner to develop and construct a network that meets public safety's critical communications needs, both at the outset, over the entire term of the license, which currently is for ten years, and into the future. Public safety's needs, and technology available to meet those needs, will not remain static. There will be a continuing need for input from the public safety community with regard to network upgrades being implemented by the commercial operator (as every commercial operator knows, a network must be continually maintained and upgraded). We see the PSST in a continuing role as the public safety representative in these matters.

There is also a very important role to be played with respect to the public safety community itself, to educate public safety users and assist them in making the transition from the old reliance on mobile communications to the broadband future. There are hundreds of public safety organizations around the country, and many have a strong need for support by someone who understands public safety and can explain how and why to embrace this new network. Finally, priority communications for public safety – expressed in the concept adopted by the FCC of preemption of spectrum on the network when public safety needs require it – has to be implemented in an effective and responsible manner by an organization rooted in public safety. No priority system of the type envisioned by the FCC order exists today, and a lot of effort is being devoted and planned to be devoted by the PSST to develop this priority system and adopt procedures dedicated to it being used effectively and appropriately by public safety.

Now, in fact these responsibilities were not matched by an equally clear and appropriate source of funding to assure their successful accomplishment. The FCC order did not provide funding for the non-profit entity selected by it to serve as the Public Safety Broadband Licensee. There is no allocation in existing law – nor in pending legislation – for the funding to meet the PSST's needs. Although many core public safety organizations have contributed the time and knowledge of their executives and managers to assist the PSST, those organizations are challenged to meet their own budgetary needs, and cannot provide meaningful financial support to the PSST. There is also a requirement in the FCC order that the PSST pay for the relocation of the narrowband channels that resulted from a shuffling of the 700 MHz spectrum. Our estimate of this cost is well in excess of the $10M required by the FCC's order to be covered by the D Block Winner.

In the total absence of conventional funding alternatives, the PSST has made the suggestion that the commercial D block operator, which will be using for its own commercial purposes and profit a significant portion of the spectrum allocated to public safety, be the principal source of that support. The FCC order envisions that the use of public safety spectrum by the commercial D block operator will be under a lease, and we have suggested that there be a lease payment, as there would be for any lease, that is reflective of the value of the public safety spectrum the commercial D block operator will be using.

The PSST had candid conversations with a number of representatives of potential D Block bidders well prior to the start of the auction concerning its intention to have a lease payment for the use of the public safety spectrum. The PSST discussed its need to identify a source of funding for its activities, the activities that required funding, why a spectrum lease payment was an appropriate mechanism to employ, and why we could not yet state with certainty the exact amount of the payment -- in the original draft of its Bidder Information Document (BID), which was publicly posted on the PSST's web site on November 15, 2007, well in advance of the auction.

It is important for this Committee to appreciate that the PSST's BID document was developed in response to the specific requests made in FCC-filed comments by potential D Block bidders that they needed to have a reasonable idea of what the PSST was likely to propose in the NSA following the auction. Unlike any other FCC auction, the FCC envisioned here that many of the terms of the partnership between the commercial D block operator and the public safety licensee would be set by a post-auction negotiation. The PSST responded to those requests, involving many of the requesting parties in that effort. The PSST reached out to potential D Block bidders to solicit their comments throughout this process, which was conducted with abbreviated timetables required by the deadlines for the commencement of the 700 MHz auction. The BID document included the PSST's thoughts on many topics relevant to the network sharing arrangement, of which a lease payment was only one, and we believe from responses from the potential D Block bidders that the BID document was generally well received.

We understand that the uncertainty of what the final arrangement will look like has been one of the concerns raised for the failure of the D block auction, and the PSST is committed to work with the FCC and potential D Block bidders to reduce the level of uncertainty. We tried to do that in the limited time that was available prior to the start of the quiet period on December 3rd, and it is one of our most important action items that we plan to undertake in the context of the new auction. We plan to talk with potential bidders and the FCC and be as forthcoming and flexible as we can to ensure that this new auction is successful.

One other item we would like to clarify. At no time during this process did the PSST ever express a preference for any particular type of D Block winner or commercial business plan – incumbent or new entrant, wholesale or retail, open access or operator controlled access. We were opposed to any limitations on participation in the auction that might deprive public safety of the opportunity to partner with any entity that could best construct and operate a nationwide broadband network capable of meeting public safety's legitimate mission critical communications needs. We do understand that a public/private partnership structure and the shared broadband network must meet the basic needs of both its commercial and its public safety constituencies, or it will work for neither of them.

We also understand that it is our role in the process to be the advocate for the needs of the public safety community. Public safety users need broader network coverage than is commercially available and they need "higher than commercial" levels of network reliability, survivability and redundancy. All of these things cost money that a commercial wireless operator would just as soon not spend, and it is the reason these things are not available to the public safety community today. Striking that right balance is the challenge we are faced with today.

So where do we go from here? We agree with the conclusions expressed by many FCC Commissioners and Members of Congress that we need to modify the D Block auction rules in ways that should produce a successful re-auction. We are grateful that the position of the FCC and Congress recognizes public safety's needs for a modern, nationwide, interoperable communications solution as in the best interests of our nation, and a step that is long overdue. We continue to support the FCC's conclusion that a public/private partnership, shared network approach presents the best near term potential solution.

Certain aspects of the rules that were applicable to the D Block have been cited as possible reasons for the absence of a satisfactory auction outcome, among them the possible forfeiture of the down payment amount if no mutually acceptable NSA is entered into, the perception that the D Block's reserve price was set too high, and the claim that the PSST's intention to seek an annual spectrum lease payment drove potential bidders away.

(1) The PSST supports the elimination of a forfeiture penalty absent an FCC finding of bad faith. We did not seek a penalty to tip the negotiating balance in our favor and we have no desire to create undue risk for D block bidders.

(2) With regard to the reserve price, the PSST believes the focus should be on making long-term mission critical communications capabilities available to members of the public safety community nationwide. We realize that the public safety objective needs to be balanced with charging a fair price for the D block spectrum, but we strongly support a mechanism for ensuring that this second auction not fail,

(3) Now, it is a fact that the PSST needs a source of funding to fulfill its responsibilities. Any source of funding – so long as the amounts are adequate, committed and available on a timely basis – will do, whether federal grant, lease payment or otherwise. What is not acceptable is that we do not have the resources to discharge our responsibilities to the public safety community. Indeed, the PSST would welcome a federal grant that would assist us in conducting the important work we are doing on behalf of the public safety community and the citizens we serve.

In conclusion, we in the public safety community wish to applaud the efforts of the FCC, of members of this Committee and of Congress for their support of the public safety broadband network and the public/private partnership approach. We solicit your help and support in transforming Chairman Martin's statement before this Committee in last year's oversight hearings into an accurate prediction of the future: "My [D Block] proposal will help the Commission ensure that public safety keeps pace with the advances in communications and gives first responders the broadband capabilities they need to protect safety of life and property of the American public." In those same hearings, Commissioner Copps echoed Chairman Martin's policy sentiments on this topic, supplying the sense of urgency as well: "The challenge is to make sure that this network ***actually works for public safety.*** To me, this means it is built to public safety standards and that its effectiveness cannot be curtailed by commercial decisions. ... ***We cannot – we simply cannot – fail.***"

We look forward to working with this Committee to make the public safety broadband network a reality in the near future. You can count on us for flexibility, focus on solutions and dedication to our one goal – an effective broadband communications network available to meet the needs of public safety in providing critical first responder services to our nation.

SUMMARY OF TESTIMONY OF

Chief Harlin R. McEwen

Chairman and Chief Executive Officer,
Public Safety Spectrum Trust Corporation

- **National public safety broadband network is critical** for police, firefighters, emergency medical personnel: need network hardened to withstand catastrophes, all first responders on same network
- **PSST deeply disappointed** that D Block did not attract a winning bid, will work with FCC to remedy - cannot let this auction fail
- 700 MHz auction exceeded expectations – **set aside for public safety is affordable**
- **PSST performs important, ongoing function** as public safety licensee, beyond construction of network - educating public safety users, implementing unique priority and preemption plan, network control delegated by FCC order
- PSST needs **appropriate source of funding**. PSST suggested **D block operator make lease payment** equal to value of public safety spectrum used by D block
- Developed **BID document** to provide info to D Block bidders – **well received**
- **Uncertainty was key concern in failure** of the D block auction - PSST committed to work with the FCC and potential D Block bidders to reduce uncertainty
- No preference for any particular type of D Block winner – **all bidders welcome**
- Need to **modify D Block auction rules**:
    - (1) Support **eliminating forfeiture penalty** absent FCC finding of bad faith
    - (2) **Reserve price**: important goal is mission critical communications capabilities for public safety community, **no need for reserve price**
    - (3) **Funding: badly needed, any source of funding acceptable**. Lease payment makes sense, federal grant also welcome
- Applaud the efforts of the FCC, Congress for support of public safety broadband network and public/private partnership approach - challenge is to **make sure network actually works for public safety**

Mr. MARKEY. Thank you, Mr. McEwen, very much.

Our second witness is retired Rear Admiral Robert Duncan. He serves as senior vice president of Business Development and Government Services of Rivada Networks. Prior to joining Rivada, or Rivada?

Admiral DUNCAN. Rivada, yes, sir.

Mr. MARKEY. Rivada. Mr. Duncan served as a—I have learned that you don't say Nevada, you say Nevada, and I unfortunately learned that in the presidential race helping somebody, they don't appreciate the mispronunciation— served as a rear admiral of the United States Coast Guard in a career that spanned more than 34 years. We welcome you, sir, and we thank you for your service to the country.

STATEMENT OF ROBERT F. DUNCAN, REAR ADMIRAL, U.S. COAST GUARD (RETIRED), SENIOR VICE PRESIDENT, GOVERNMENT SERVICES, RIVADA NETWORKS

Admiral DUNCAN. Mr. Chairman, thank you for allowing me to appear, Ranking Member Stearns, and I did serve in Boston and am an Eagle from Boston College so your pronunciation is probably the correct one. I will defer to that.

Mr. MARKEY. And how about winning the Frozen Four?

Admiral DUNCAN. We could have a whole hearing on that subject. I know our time is limited, sir, but——

Mr. MARKEY. I will extend your time.

Admiral DUNCAN. Thank you, Mr. Chairman.

At the outset, let me observe that I have seen unanimity in the goal of being recognized as providing modern, capable communications in the hands of people such as Chief Dowd and others whose phone could ring at 2:00 tomorrow morning and put it in their hands today, as soon as possible. I hope you will indulge one more request and that is to incorporate by reference the sage advice that your mother gave, to work smarter and not harder.

I am offering my comments today informed by two particular frames of reference, one as a first responder for over 34 years and most recently leading the Coast Guard's response to and recovery from Hurricane Katrina and shortly after that, Hurricane Rita. I was the Eighth District commander covering the Gulf of Mexico and the inland river system, responsible for all or parts of 26 States, and while we received a great deal of attention and the praise of the Senate and it was my great pleasure to take that, we also took a look at what we did and how we could do better as real professionals, and one of those observations I will offer here, and that was communications. We have made others and those are part of the record of the Senate Homeland Security Government Affairs Committee, but I thought the communications was something that we should spend time in.

The reason that I felt that way and what led me to take the position as senior vice president at Rivada was traveling around the impact area of complete devastation, using what the Federal Government had provided me, seeing what others were using, seeing what my peers in DOD were using. I would encounter young lieutenants who would be typing on a PDA or something. I would say, "What are you doing" and they would say "nothing." I would say, "Really, what are you doing?" And that is when I learned about text messaging and SMSing and I said, "Is it working for you? Go ahead and use it." Go at risk. Put this information out. Use the tools that you give to your children when they go to college. What I gave my daughters when they went to college was far more effective than what I took out of a helicopter when I put boots on the ground at the Superdome. It was just what I needed to take data and send it back to people who could evaluate that data from a knowledge standpoint and provide me guidance that I would have not the national piece to and focus on other things.

We have seen incredible innovation, several of the commissioners and a number of the members have mentioned, but this is a sector where innovation leads, where new concepts, new ideas are brought in and attracts the best investment, the best engineering talent, and we are seeing a massive investment and development in communications and that needs to be put in the hands of first responders.

Two years ago the Northern Command, the part of DOD that organizes responses with the United States, looked at the idea of a private cellular network that could be brought into an area of disaster, that ties in LMR technologies, that reaches back to a satellite if necessary and reaches into the undisturbed part of this massive network that is built out across the country and piloted that during Katrina. Rivada Networks was the company that built that system and that is now presently located in the home States of 19 members of this subcommittee. It is presently on standby for the flood control measures in Louisiana in the hands of the Louisiana National Guard. It is a current system. It is not something that is coming in 5 years and it will be improved and others will enter this space. There is a great deal of innovation and work in a public-private way, and I ask you to think a little more expansively perhaps about what public-private is, to shape commercial offerings and put those in the hands of first responders. We have that capability. It is currently deployed. It will be improved. It is obsolescent proof incorporating new technologies as they go and not shedding legacy systems that need to be incorporated.

One thing that we learned from Katrina is that we don't know who our partners will be. It is hard to sync up with folks that you didn't know were going to be in town and are necessary for you to do your missions. I mention in more detail in my written comments, but in my case, that included people who start refineries after they have been flooded, people who bring barge loads of materials into certain industries to jump-start an economy and down to NGOs and animal control folks, animal rescue folks, and some of those become part of your command central part of the time, some of them come in later on in other processes but having a system that is agile enough to incorporate new responders that come to an area, perhaps responders you didn't anticipate, given the situation, is an imperative and is a current need by first responders today.

I am with Rivada Networks. We provide systems that bridge that gap to provide that kind of dedicated capability to first responders, building on that massive amount of investment that is already across this country. If I might just say that we talk in terms and defense of asymmetric threats, you know, the notion that someone is not going to take us on on our strengths, the corollary to that is, we have some real asymmetric advantages in this country. Take advantage of those, incorporate those into the service of first responders. When we ask the Pennsylvania National Guard to respond to the Gulf Coast, we don't tell them to build a road to get there. It is OK to use the Eisenhower interstate highway system. There is a great analogy in the communications field. Now, use those commercial structures that survive and you will hear some of the investment that has already gone into them. It is hard to see a new entrant matching that kind of investment and building out a spoke system across the country just for first responders.

Thank you, sir.

[The prepared statement of Mr. Duncan follows:]

STATEMENT OF

ROBERT F. DUNCAN
Rear Admiral, United States Coast Guard (retired)
Senior Vice President, Rivada Networks

ON

Interoperable Communications

BEFORE THE
House Energy and Commerce Committee
Subcommittee on Telecommunications and the Internet
April 15th, 2008

Chairman Markey and Members of the committee: Thank you for this opportunity to address you today and to discuss the requirements for communications interoperability for "first responders" leading disaster and crisis responses in America today.

I offer these thoughts from two perspectives which, actually, inter-relate. I retired from the United States Coast Guard in June 2006 following a most rewarding career of over thirty-four years. In my final active duty assignment, I served as the Commander of the Eighth Coast Guard District, and Maritime Defense Zone Eight, headquartered in New Orleans, Louisiana. That position gave me responsibility for the conduct of all Coast Guard operations across the Gulf of Mexico and the extensive inland rivers system; an area encompassing all or part of twenty six states. In that capacity, I led Coast Guard preparations for, and the response to and recovery from Hurricane Katrina and, about three weeks later, Hurricane Rita. The entire Service provided massive resources to that operation and the results performed by the Coast Guard were widely praised. My last appearance before the Congress was as lead witness before the Senate Committee on Homeland Security and Governmental Affairs. It was the only hearing, in the series of hearings examining the hurricane responses, that was specifically directed at commending an agency for its response and it was most gratifying to receive that praise on behalf of the terrific men and women of the entire US Coast Guard. Our approach, preparation measures and actions are addressed in the record of that hearing, and I remain in genuine awe of the dedication and accomplishments of that absolutely self-less team of consummate professionals.

As professionals, however, we recognized that a close examination would provide opportunities to improve based on lessons learned from what has been described as the largest natural disaster to hit the United States. One area which I suggested for serious improvement, was the area we are exploring today: interoperable communications. In disasters large and small, the best of individual responders and teams of responders are faced with an absolute imperative to be able to coordinate their actions with a wide range of responding entities, from every level of government, and increasingly from NGOs and private and commercial entities as well. Many vital responders may not be known prior to the event, when response leaders discover that they will need assistance beyond their usual cast of partners or to draw upon expertise not normally resident within government responder communities. In my case, the latter category included ferry and barge operators, off-shore production platform operators, animal rescue groups, refinery engineers, marine salvors and a host of other actors who provided valuable talent and capabilities that directly facilitated my ability to accomplish Coast Guard missions. The ability to quickly evaluate the actual, versus the anticipated, impact of the disaster and to bring meaningful response to the scene, supported and sustained for the necessary duration of the relief and recovery; to acquire and maintain 'situational awareness' and to share that among responders and top levels of leadership, at and remote from the scene; the ability to reach out of the disaster zone to acquire needed data and guidance; all are essential elements of a successful response. And all rely upon effective interoperable communications.

I was struck, during the lengthy disaster, that I and other response leaders had a wide range of communications capabilities that could trace their lineage back to the "Walkie talkies" that Private Ryan carried ashore. The communications devices which I provided to my children when they left home for college actually represented a more fitting capability to serve the needs that I experienced. Under ordinary circumstances, they could call home from wherever they were, call their friends, send photos and, with some commercially available enhancement to what I provided them with, connect to the world and all its data through the internet. All of this capability was at their fingertips, in a format that they readily understood, used on a daily basis and readily available today. The massive amount of investment in R&D and the very sophisticated engineering that made that happen was invisible to them but reliably available to them wherever they went. I saw that also in the younger generation of folks who were part of my team. As I traveled about the disaster zone, it was not uncommon to see a twenty-something lieutenant or petty officer rapidly typing on the small keyboard of their private PDA. When I asked what they were doing, they told me they were "SMS'ing", text messaging, or some other activity supported by such devices, but not available to me on my government communications. And, frequently, they were able to use these to augment their communications capabilities. I supported their use of these approaches under the circumstances. It struck me that there was, in fact, a wide array of commercially available, off the shelf, technologies that we were not adequately exploiting during disasters. I recognize that a key imperative is the reliability and availability of this needed capability at a time when ordinary systems, including perhaps those which support my daughters' cell phones, are challenged by the emergency that necessitated the response. If that reliability and dependability could be addressed and guaranteed, within the acceptable risk-analysis framework that drives all such decisions in a crisis, then the first responder community should exploit this enhanced capability and incorporate it into their response plans.

Following my retirement from the Coast Guard, I accepted directorships on two non-profit rescue "first responder" organizations (NIUSR & N-CORE) and regularly participate in the national and international dialog on crisis leadership and emergency response through panel appearances, writing and speaking, and active participation in national disaster exercises, and I currently serve as Senior Vice President of Rivada Networks; a leading innovator and provider of interoperable deployable communications that provides key communications systems to such major first responders as U.S Northern Command, FEMA, the National Guard, states and major municipalities. While we are used to speaking about "asymmetrical threats", I believe that we, as a nation, possess real "asymmetrical advantages"; especially in the area of interoperable communications. For example, when the Pennsylvania National Guard is ordered to support emergency operations on the Gulf Coast, as it was following Hurricane Katrina, we did not require that they build a government-dedicated road from Anneville to New Orleans. It was assumed, properly, that they would take advantage of the Eisenhower inter-state highway system to get there. If speed was essential, they could readily convoy under a blue light escort to get preferential passage.

There is, I believe, a direct analogy to our current national communications architecture. There is a significant amount of commercial communications infrastructure deployed across North America which is providing interoperable communication to millions of people today. When an event succeeds in disrupting a part of that structure, there are present capabilities deployed that could be used to allow first responders to connect between the disparate communications devices that they bring to the scene and to reach back and tie in to that cellular network and the internet. Over two years ago, US Northern Command and the National Guard Bureau began looking at the possibility of using commercial cellular broadband technology to assist communications capabilities for Homeland Defense and Homeland Security missions. Rivada Networks worked with their leadership to pilot the concept of standalone, self-sufficient private cellular systems which can be instantly stood-up to provide cellular voice and data capability when commercial cellular networks become unavailable. The concept was proven and the DoD certified systems, known as ICE-S systems (Interoperable Communications Extension-Systems), have been acquired and distributed nationally through the entities mentioned above and are currently available to a wide range of first responders. Today, during the time of this hearing, The Louisiana National Guard is at a heightened state of readiness, carefully monitoring the swollen Mississippi River and ready to support relief actions at several emergency spillways. Their ICE-S system is battle-rostered as part of that response. Enhancing the agility of their response, the Louisiana National Guard is converting their regular cellular devices to a configuration which permits them to use their day-to-day communications devices seamlessly on their emergency ICE-S system. This avoids reliance on special devices, with special operating instructions, and the reliance on adequate maintenance in a stand-by mode.

The use of such private systems requires commercial agreements with spectrum owners, special certification by the appropriate Department of Defense entities and, finally, the approval of the FCC.

As a first responder, I appreciated the powerful and ever-advancing capabilities that were embodied in today's commercial communications devices and the networks which support them. My concerns about their reliability and availability when most needed, the classic concern of first responders, have been satisfied by the groundbreaking work accomplished by Rivada Networks with US Northern Command, FEMA, the National Guard, and others, and specifically the FCC which appreciated the value of this novel approach at an early stage. Other commercial entities deserve credit and it is appropriate to note here that this is a time of great innovation in the communications sector. In fact, my vantage point leads me to recognize, as another 'asymmetric advantage', that market forces and the free enterprise system are very aggressively moving to meet the evolving capabilities requirements identified by our first responder community. And those forces, and those essential capabilities, like our ICE-S system, are available, and deployed, today. We need not, and can not, embrace a regulatory approach which promises unclear capabilities, at a distant time, and which require massive investment in entirely new infrastructure. Adding to the latter challenge are an uncertain and commercial outcome which in themselves council caution in going further down that path.

Thank you for this opportunity to offer testimony. I will be happy to answer any questions you may have.

Mr. MARKEY. Thank you, Mr. Duncan, and thank you for that brilliant Jesuit-backed testimony for the Committee. I appreciate that.

Next we are going to hear from Morgan O'Brien, who is a cofounder and chairman of Cyren Call Communications. Cyren Call serves as an advisor to the Public Safety Spectrum Trust. Welcome, sir.

STATEMENT OF MORGAN E. O'BRIEN, CHAIRMAN, CYREN CALL COMMUNICATIONS CORPORATION

Mr. O'BRIEN. Thank you, Mr. Chairman and members of the Committee.

In the interest of time, I would like to restrict my opening comments just to three points. The first point is that Cyren Call, having come together more than 2 years ago and brought together wireless experts and public safety experts to study this exact problem, has spent 2 years talking to vendors, talking to users, talking to literally hundreds of experts and analyzing this issue, and we want to make sure we say to this committee that regardless of the failure of the auction, we can see looking at a business case, the assumptions of which are reasonable as we know them to be reasonable. There is a business case for a successful public-private partnership and we urge you to consider working with that concept. It is in the absence of any other reasonable approach and in the last couple of years I think it has been indicated that no other reasonable approach has come forward. It is something definitely in the public interest and something about which we are passionate.

Number two: The FCC is to be congratulated because in this proceeding I believe they have gotten so many things right, and one of the things that they got right, in our view, is composing, as they have, a single public safety spectrum trust made up of 15 member organizations that is really unprecedented in public safety communications to have taken a step like this. I have had the privilege of working with this group now, since we were selected by them as an advisor in October and believe me, the view from inside is even more impressive than the view from outside, in terms of the unbelievably hardworking people and the expertise that is represented on this board.

However, that licensee must be given the assistance of any number of wireless experts if it is going to hold up its end of the bargain that the FCC is anticipating here. The relationship needs to be clarified. That is clear. The relationship needs to be clarified. The structure of the relationship between the PSST and a potential D block bidder needs to be clarified, but in doing that, advisors up to the task. Naturally, I hope to continue to be part of that team but that is nowhere near as important as getting the right kind of experts aligned with Public Safety Spectrum Trust so that they meet the very heavy responsibilities that have been given to them in the Commission's Order.

And thirdly, the time for this—I think from any perspective, the time for doing this is significantly behind us. The days that we are living in, in which there isn't a crisis that once again shows up the failures of the system—to a certain extent, we have been lucky. So, needless to say, neither we as the advisor nor Public Safety Spectrum Trust would be urging rash action. On the other hand, I take with a definite grain of salt, and I hope you do too, some of the calls for taking what I would describe to be undue deliberation and caution in moving to the next step. This is a high-risk process of finding a solution for a problem for which there is no other reasonable solution that has emerged. With the right kind of dedication on the part of experts such as in this room and the FCC's clear interest in getting this thing done, I believe it has every chance of succeeding, and I thank you.

[The prepared statement of Mr. O'Brien follows:]

WRITTEN TESTIMONY OF
Morgan O'Brien, Chairman
Cyren Call Communications Corporation
Before the
SUBCOMMITTEE ON TELECOMMUNICATIONS AND THE INTERNET
COMMITTEE ON ENERGY AND COMMERCE
UNITED STATES HOUSE OF REPRESENTATIVES

April 15, 2008

Good morning Chairman Markey, Ranking Member Stearns and distinguished Members of the Subcommittee. My name is Morgan O'Brien. I am the Chairman of Cyren Call Communications Corporation. Prior to forming Cyren Call, I held various senior management positions with Nextel Communications, Inc., a company I co-founded in 1987. I served most recently as Vice Chairman of Nextel prior to its merger with Sprint Corporation. I have been a consistent advocate for providing first responders with the mobile communications tools and solutions they require, given their mission-critical responsibilities, and so also have been a staunch supporter of bringing next generation wireless broadband communications technology to the public safety community.

Cyren Call Communications Corporation was founded in 2006. It currently serves as the advisor to the Public Safety Spectrum Trust Corporation (PSST) – Cyren Call's sole client and the focus of substantially all of its daily activities. Cyren Call is led and staffed by a small group of veterans of the wireless industry and the public safety communications community. Cyren Call is dedicated to assisting the PSST in the creation of a nationwide, wireless broadband network that will be designed and operated to satisfy the criteria required to make it suitable to carry public safety communications.

Let me be frank. There is one and only one reason that Cyren Call was created: the failure by federal, state and local governments to provide adequate, ongoing financing that would enable the public safety community to build, operate and upgrade such a network itself. The nation should consider itself fortunate that – unlike other issues we face – this is one that money **can** solve. But that is no solace to first responders who were unable to communicate with one another during the tragic events of 9-11 and, shockingly, seven years later, repeatedly encounter this same lack of seamless interoperability. It is of no use to them that money would solve this problem when that money is not forthcoming.

Two years ago, in the face of persistent inaction by government at all levels to provide the funding needed to finance a state-of-the-art, interoperable, nationwide, broadband network designed to public safety specifications, including the funding needed to maintain and refresh, that network, Cyren Call proposed an alternative approach. Cyren Call, unlike some other parties that have expressed opinions on how to address this critical and worsening communications crisis, simply could not maintain the fiction that if public safety just waits long enough, the Federal Government or Bill Gates or the Tooth Fairy will provide the multi-billions of dollars needed for a communications network that is critical to national security and to the day-to-day safety of our emergency responders and the public they serve.

Therefore, Cyren Call proposed the creation of a public safety/commercial partnership and the construction and operation of a shared broadband wireless network in our April 27, 2006 filing with the Federal Communications Commission. We proposed setting aside 30 MHz of 700 MHz spectrum for that purpose, and subsequently proposed legislation to constitute an entity similar to the PSST to hold the nationwide license for the spectrum. The FCC itself, after notice and comment, embraced certain elements of this approach in its Second Report and Order, including creation of a nationwide public safety broadband spectrum licensee and the concept of entering into a public safety/commercial partnership structure to join the public safety spectrum with commercial spectrum so that the combined spectrum could be deployed in a single, shared network for commercial and public safety users alike. The commercial D Block spectrum was designated by the FCC for inclusion in that shared network.

We at Cyren Call were very disappointed that the initial D Block spectrum auction did not produce a winning bidder. The public safety community, through the PSST, still stands ready to make 10 MHz of its own broadband spectrum available for the construction and operation of the contemplated shared commercial/public safety network. As the advisor to the PSST, Cyren Call will work diligently to assist the PSST in its efforts to facilitate a successful re-auction of the D Block. Following the successful conclusion of a D Block re-auction, Cyren Call would expect to continue to advise and assist the PSST in the negotiation of a Network Sharing Agreement (NSA) that will strike an appropriate balance between the needs of the public safety community on the one hand, and the needs of the commercial users that are needed to establish and maintain a viable network on the other.

With me on this panel is Chief Harlin McEwen, the Chairman and Chief Executive Officer of the PSST. His written testimony provides a thorough analysis of the issues before this Subcommittee. I share and support the views expressed in his statement. However, I would like to address a few additional items for the Subcommittee's benefit.

The most important item I wish to emphasize is that the approach adopted by the FCC, the creation of a public safety/commercial partnership model for the construction and operation of this new public safety broadband network, is a sound one. We are here today only because the auction of roughly half of the spectrum that was intended to be deployed in the contemplated shared network failed to attract a bid at or above the minimum reserve price set for the auction. That does not mean that the concept of a public safety/commercial partnership, or a sharing of spectrum and other network resources between commercial and public safety users, is flawed. In the absence of the massive government financial support required to deploy, operate and upgrade a nationwide, interoperable, broadband public safety-grade wireless network – one that stays current with the very rapid pace of technological innovation in our industry – the only viable alternative identified to date is through a public sector/commercial partnership structure.

Two years ago, Cyren Call challenged both government and industry to come up with a better solution, not just platitudes about the importance of public safety communications and wishful thinking about possible future funding from unidentified sources, but one with an economic model capable of working in the real world. None has emerged. Unless and until a better, realistically available route is identified to obtain the needed spectrum and funding for a nationwide, public safety-grade broadband network, we need to concentrate on facilitating the successful launch of the existing proposal for a shared network.

As you know, the public safety community worked tirelessly to make the D Block auction a success story. The PSST in particular undertook significant efforts, beginning even before it was formally granted the public safety broadband spectrum license by the FCC, to stimulate interest in the D Block auction and in the unique opportunity it presented to an existing or potential commercial wireless network operator. (No one will be surprised to learn that there are costs associated with this work. Taxicabs, hotels, law firms and others do not provide services to the PSST gratis, and no telephone or electric company has volunteered to support the PSST's mission by providing free service. To date, and only out of necessity, the PSST's funding has been provided by Cyren Call. Whatever other actions come out of this hearing, I urge Congress to find an alternative, interim funding source for the PSST so that it may continue to fulfill the important tasks imposed upon it by the FCC rules.) Nevertheless, the auction failed to generate a bid on the D Block that met the reserve price established by the FCC on the basis of its allocation of the budgetary goals contained in the Deficit Reduction Act of 2005.

However disappointed we all are at the lack of a satisfactory outcome in the initial auction round, as Chief McEwen has emphasized, now is the time to redouble our efforts to make certain that this second chance winds up delivering the public safety communications capabilities our first responders and the public both deserve. We are trying to build something new here. Indeed, an important additional benefit to be provided by this network – one that we cannot afford to ignore – is the delivery of improved broadband communications capabilities in rural areas. This is a critical national public policy objective that, as yet, has not been realized for the very same reason that we do not have a state-of-the-art, nationwide public safety communications network – lack of funding. The shared broadband network to be deployed on both D Block and public safety spectrum will have coverage well beyond the typical commercial-only network, as specified in the FCC rules. This enhanced rural coverage will bring new educational, medical and economic opportunities to our citizens in rural America.

Thus, we cannot and should not be deterred by the fact that the last auction did not succeed according to its terms. As Glenn Bischoff, Editor of Mobile Radio Technology magazine, recently wrote in an article entitled "Some Needed Perspective": "The journey to a nationwide interoperable broadband wireless communications network for first responders will be a marathon, not a sprint, and it will occur over an obstacle course, not smooth pavement. It won't be easy, nor will it be quick. Nothing worthwhile ever is. The project is in its earliest stages. Give it time – and give the PSST and Cyren Call a chance."

So what can we do to give this vital project the best chance possible? Cyren Call intends to work with the PSST to provide input to the FCC as it goes through its careful process of establishing appropriate new rules for the re-auction of the D Block. Many people have speculated about why the initial D Block auction did not succeed. In his written testimony, Chief McEwen has referred to several factors that may have provided economic disincentives to actual or potential bidders – including the level at which the reserve price was set for the D Block spectrum, and the possible forfeiture penalty in the event NSA negotiations fail. Many people felt that these factors posed an unreasonable risk to the bidders. I defer to his excellent treatment of those points and suggest that members of Congress and the FCC may want to include those items in their review process as the rules for the D Block re-auction are being formulated.

It also would be prudent for the FCC to consider whether the scope of this undertaking, particularly in light of the current capital market crunch, suggests that the optimal D Block partner might be a consortium rather than a single entity. Andy Seybold, a well-known commentator on the wireless world, recommended in a recent column that a group comprised of a network management company, one or more wireless carriers with expansive geographic coverage, rural operators such as those represented within the NRTC and the Rural Cellular Association, and equipment vendors represented the ideal combination of resources and expertise to ensure a successful public safety/commercial partnership with the PSST. He noted that the relatively abbreviated period prior to the 700 MHz auction and the FCC's anti-collusion rules throughout the auction process made it impossible for potential consortium participants to come together. Cyren Call recognizes that current FCC rules permit auction participation by such a group. However, in light of the important public policy implications of this shared public safety/commercial network, it may be appropriate to consider rules that favor such an applicant.

Of course, this concept does not in any way suggest that the D Block be sub-divided into smaller geographic licenses. The very core of this broadband public safety network is that it will be nationwide in coverage with a single technology platform. Anything less would be contrary to the compelling record in the FCC's rulemaking proceeding and the Commission's findings based on that record.

Another matter that will require serious consideration in developing the optimal environment for a successful re-auction is the results of the recent 700 MHz auction. The post-auction spectrum landscape reflects increased holdings for both Verizon and AT&T, by far the two largest providers of mobile wireless services today. This is not a criticism of these companies' auction success; by their nature, auctions put assets in the hands of those that place the highest economic value on them and, therefore, favor those with the greatest economic resources. But the results of the 700 MHz auction raise two critical issues that cannot be ignored.

The Commission should consider whether the public interest would be served by re-auction rules that favor parties without substantial 700 MHz holdings. Certain members of Congress and of this Subcommittee have indicated a deep-felt desire to promote greater competition in the delivery of broadband services. Smaller and more rural providers have expressed dismay that the recent 700 MHz auction did not result in meaningful opportunities for their successful participation. While auctions are designed to be applicant-blind, the FCC's touchstone is the public interest standard set out in the Communications Act, a standard that includes robust competition as one of its elements. Thus, without prejudging what the outcome should be, it is apparent that the FCC will need to consider these issues in its deliberations.

This evaluation is particularly important in the context of a D Block re-auction. On the one hand, there are significant potential advantages to public safety if it partners with an established wireless operator with already deployed infrastructure. Dollars that do not have to be devoted to building cell sites instead could be used to meet other requirements of this shared public safety/commercial network, such as extended coverage and improved site hardening. Having helped create Nextel as the third competitor in what had been a duopoly cellular industry, I am well aware of the challenges that await a new entrant in a concentrated marketplace. That potential benefit to public safety of a partnership with a nationwide 700 MHz incumbent cannot be discounted in the FCC's analysis.

However, neither the PSST, nor the FCC, nor this Subcommittee should ignore the fact that both Verizon and AT&T already elected **not** to participate in a partnership with public safety by choosing not to submit D Block bids in the previous 700 MHz auction. This apparent disinterest in assuming that role creates a conundrum for public safety. Some potential D Block bidders have indicated that they are unwilling to invest the time and resources in developing a business plan for this partnership for fear of being only a "stalking horse" for these two companies, companies that have the financial resources to outbid all other applicants if they choose to do so. But if other bidders are deterred on that basis, and there is no competitive challenger incentivizing Verizon and AT&T to participate, we may be left with a repeat of the first D Block auction.

We all know that there are hurdles that need to be overcome to make this shared network a reality. There is no accepted template or term set for creating public safety/commercial partnership arrangements of this type in the wireless world. While it may not be possible to eliminate all uncertainties, the PSST and Cyren Call will work with the FCC itself to fashion auction rules that are flexible enough to allow us to resolve them appropriately. As stated in Chief McEwen's testimony, the PSST is committed to working with potential bidders to address questions about public safety expectations and all reasonable propositions that will facilitate an equitable public safety/commercial partnership, consistent with the operational requirements of public safety networks. The auction is a one-time event. The Network Sharing Agreement sets the framework for a public safety network that will last years. Getting that done right has to be our overriding priority.

Thank you for the opportunity to appear before you. I would be happy to answer any questions you may have.

ONE-PAGE SUMMARY OF MAJOR POINTS OF WRITTEN TESTIMONY OF
Morgan O'Brien
Chairman, Cyren Call Communications Corporation

April 15, 2008

- **The approach adopted by the FCC, the creation of a public safety/commercial partnership model for the construction and operation of this new public safety broadband network, is a sound one.** All of us are here today only because the auction of roughly half of the spectrum that was intended to be deployed in the contemplated shared network failed to attract a bid at or above the minimum reserve price set for the D Block auction. That does not mean that the concept of a public safety/commercial partnership, or a sharing of spectrum and other network resources between commercial and public safety users, is flawed. In the absence of the massive government financial support required to deploy, operate and upgrade a nationwide, interoperable, broadband public safety-grade wireless network – one that stays current with the very rapid pace of technological innovation in our industry – the only viable alternative identified to date is through a public sector/commercial partnership structure. Two years ago Cyren Call challenged both government and industry to come up with a better solution, not just platitudes about the importance of public safety communications and wishful thinking about possible future funding from unidentified sources, but one with an economic model capable of working in the real world. None has emerged. Unless and until a better, realistically available route is identified to obtain the needed spectrum and funding for a nationwide, public safety-grade broadband network, we need to concentrate on facilitating the successful launch of the existing proposal for a shared network.
- Whatever other actions come out of this hearing, **I urge Congress to find an interim funding source for the PSST** so that it may continue to fulfill the important tasks imposed upon it by the FCC rules.
- The shared commercial/public safety network **will deliver improved broadband communications capabilities in rural areas** due to the FCC-mandated coverage well beyond the typical commercial-only network. This enhanced rural coverage **will bring new opportunities to rural America, as well as to public safety**.
- It also would be prudent for the FCC to **consider whether** the scope of this undertaking, particularly in light of the current capital market crunch, suggests that the **optimal D Block partner might be a consortium rather than a single entity**.
- Another matter that will require **serious consideration** is whether the public interest would be served by **re-auction rules that favor parties without substantial 700 MHz holdings**.

Mr. MARKEY. Thank you, Mr. O'Brien.

Our next witness is Deputy Chief Charles Dowd, who is the commanding officer of the communications division of the New York City Police Department. He is responsible for New York City's E 09911 system, as well as the police department's radio operations, which is the largest public safety radio system in our Nation. We welcome you, sir. Whenever you are ready, please begin.

STATEMENT OF CHARLES F. DOWD, DEPUTY CHIEF, NEW YORK CITY POLICE DEPARTMENT

Chief DOWD. Good morning, Mr. Chairman, and let me congratulate you on Boston's two out of three victory over the weekend against the Yankees.

Mr. MARKEY. Are you talking about the fact that you caught us trying to bury David Ortiz's jersey?

Chief DOWD. We already detected and removed that vile jersey from the——

Mr. MARKEY. That was a defeat.

Chief DOWD [continuing]. Foundations of the new Yankee Stadium.

Mr. MARKEY. Thank you.

Chief DOWD. And I guess I am not getting my time extended.

Mr. MARKEY. No, you will get your time extended, since we took two out of three.

Chief DOWD. Again, good morning, Chairman Markey and members of the Committee, I am Deputy Chief Charles Dowd of the New York City Police Department, commanding officer of its communications division. My command includes the responsibility for the New York City 911 system as well as the police department's radio operations, which is, as you pointed out, the largest public safety radio system in the Nation. On behalf of Police Commissioner Raymond Kelly and Mayor Michael Bloomberg, I would like to thank you for this opportunity to appear before you to discuss the 700 MHz D block auction and the importance of the Federal Communications Commission's actions going forward.

The circumstances surrounding the D block spectrum allow the Congress and the FCC to reexamine how best to assist local and State public health agencies. It affords an important opportunity to improve the responsibility capability of police, fire and emergency medical first responders. With the revenue projections of the 700 MHz band now realized, the focus should now be on how local and State public safety use of the D block, working with the Public Safety Broadband Licensee can bring mission-critical communications to levels that parallel the needs of the citizens facing an emergency and the responding officers. We urge the Congress and the FCC to embrace a concept where a D block spectrum, in coordination with spectrum managed by a public safety partnership, is primarily committed to meeting the expanded mission-critical voice and data requirements of local and State public safety agencies. This premise encompasses public-private partnerships including, where possible, commercial access to the spectrum. However, we do not believe that the FCC should proceed with another auction before considering regional options that would benefit public safety. There is no question as to the validity of the public-private partnership moving this effort forward, but there are other options to be considered that may be more beneficial to the FCC's goal of providing nationwide interoperability on compatible platforms with common spectrum.

The greatest challenge to improved communications and broader interoperability is the lack of spectrum and financial resources to construct and deploy network infrastructure. The enormous sums of monies associated with network infrastructure make improvements beyond the means of all but the largest of agencies and jurisdictions. The need to remedy this challenge is even more compelling as agencies face an enormous investment mandate that many cannot meet. This investment is mandated by FCC rules requiring all agencies in the 150–174 and 421–512 MHz bands to transition to narrowband technologies by January of 2013.

First and foremost, the FCC needs to consider the immediate needs of the major urban areas that are confronted with the immense task of replacing their existing land mobile radio system from the ground up. The FCC should also consider a more regional approach regarding the sale or auction of the D block spectrum to allow for more flexible solutions to a region's specific needs. For example, narrowbanding will require New York City to replace its entire radio system at an estimated cost of over $400 million. As we explore the existing technology, we are faced with a dilemma: our choices are limited to existing solutions developed over the last 30 years. The specifics of the rules have changed but the basis still remains: design technology that fits within the limited amount of spectrum. What if a public-private partnership could be leveraged to develop a public safety radio system that can harness the advances of broadband technology to satisfy the desired narrowband end state, spectrum efficiency? The issue is not about CDMA versus TDMA or FDMA. It is about the ability of the public safety users to determine how best to use this spectrum while maintaining focus on interoperability and new technology.

The FCC should consider allowing large metropolitan areas and regions to form public-private partnerships that would utilize the spectrum in an efficient manner, combining new commercially available technology with public safety requirements. Unfortunately, the D block rules were not written to foster regional solutions to satisfy the immediate needs of the large metropolitan areas. The concept of a single nationwide licensee assumes that one system will satisfy the needs of all agencies, and that is not possible. The FCC was innovative by allowing public safety to leverage the value of its newly allocated 10 MHz in exchange for capital investments from the private sector. However, many large cities have already begun designing and building broadband networks on other bands, thus potentially reducing the value of the spectrum to commercial enterprises.

One potential solution would be to encourage the FCC to revise the rules on distribution of the spectrum to allow cities and regions to determine the best way to proceed. Cities would then be free to use their 10 MHz to either build their own systems or negotiate with the private sector for an equitable exchange. As long as all 700 MHz systems, whether commercial or government owned, are required to meet compatible sign and interoperability standards, the systems will meet current and future public safety needs. This would allow the FCC to designate spectrum to be auctioned on a regional basis to foster local partnerships with commercial entities to develop systems that will satisfy local public safety needs. Local commercial entities may be more likely to build highly adaptable systems responsive to the needs of the region.

Reconsideration of the D block process will allow public safety entities to build in spectrum "green space" which will foster the development of systems based on new commercially available technology. Using clear spectrum in the 700 MHz band allows an entity to develop a new system without the need to retrofit existing sites and equipment. This green space approach is critical in areas such as New York City where moving from old but reliable legacy systems to new, potentially cutting-edge solutions will require exhaustive testing to ensure the reliability first responders have come to and have the right to expect.

Mr. MARKEY. Chief, if you could wrap up?

Chief DOWD. OK. In summary, we urge the Committee and the FCC to structure use of the D block where the mission-critical needs of public safety communications can be the foremost responsibility of the public and private interests involved. We have also spoken to the radio system managers of both Chicago and Boston, who have expressed their support for this concept. The spectrum should not default to the private sector nor should it default to a specific use or technology. Large metropolitan areas, in regionally coordinated public and private effort, bear the responsibility of bringing back communications networks that parallel public safety responsibilities and expand use of the spectrum significantly and efficiently.

Thank you for the opportunity to speak on these important issues. I would be happy to answer any questions you may have.

[The prepared statement of Mr. Dowd follows:]

STATEMENT OF CHARLES F. DOWD

Good Morning Chairman Markey and Members of the Committee. I am Deputy Chief Charles F. Dowd of the New York City Police Department and the Commanding Officer of the Communications Division. My command includes responsibility for New York City E–911 as well as the police department's radio operations, which is the largest public safety radio system in our nation. On behalf of Police Commissioner Raymond W. Kelly and Mayor Michael R. Bloomberg, I would like to thank you for the opportunity to appear before you today to discuss the recent 700 MHz D block auction and the importance of the Federal Communications Commission's actions going forward.

The circumstances surrounding the D Block spectrum allows the Congress and the Federal Communications Commission to reexamine how best to assist local and state public safety agencies. It affords an important opportunity to improve the response capability of police, fire, and emergency medical first responders. With the revenue projections of the 700 MHz band now realized, the focus should be how local and state public safety use of the D Block, working with the Public Safety Broadband Licensee, can bring mission critical communications to levels that parallel the needs of the citizen facing an emergency and the responding officers. We urge the Congress and the FCC to embrace a concept where D Block spectrum, in coordination with the spectrum managed by the Public Safety Broadband licensee, is primarily committed to meeting the expanding mission critical voice and data requirements of local and state public safety agencies. This premise encompasses public-private partnerships, including, where possible, commercial access to the spectrum. However, we do not believe that the FCC should proceed with another auction before considering regional options that would benefit public safety. There is no question as to the validity of the public-private partnership moving this effort forward. But there are other options to be considered that may be more beneficial to the FCC's goal of providing nationwide interoperability on compatible platforms with common spectrum.

The greatest challenge to improved communications and broader interoperability is the lack of spectrum and financial resources to construct and deploy network infrastructure. The enormous sums of monies associated with network infrastructure makes improvements beyond the means of all but the largest of agencies and jurisdictions. The need to remedy this challenge is even more compelling as agencies face an enormous investment mandate that many cannot meet. This investment is mandated by FCC rules requiring all agencies in the 150–174 MHz and 421–512 MHz bands to transition to narrowband technologies by January 1, 2013.

First and foremost, the FCC needs to consider the immediate needs of the major urban areas that are confronted with the immense task of replacing their existing land mobile radio system from the ground up. The FCC should also consider a more regional approach regarding the sale or auction of the D Block spectrum to allow for more flexible solutions to a region's specific needs. For example, narrowbanding will require New York City to replace its entire radio system at an estimated cost of over 400 million dollars. As we explore the existing technology, we are faced with a dilemma; our choices are limited to existing solutions developed over 30 years ago. The specifics of the rules have changed but the basis still remains: design technology that fits within a limited amount of spectrum. What if a public-private partnership could be leveraged to develop a public safety radio system that can harness the advances of broadband technology to satisfy the desired narrow band end state, spectrum efficiency? The issue is not about CDMA vs. TDMA or FDMA, it is about the ability of the public safety users to determine how best to use this spectrum while maintaining focus on interoperability and new technology.

The FCC should consider allowing large metropolitan areas and regions to form public-private partnerships that would utilize the spectrum in an efficient manner, combining newer commercially available technology with public safety requirements. Unfortunately, the D Block rules were not written to foster regional solutions to satisfy the immediate needs of the large metropolitan areas. The concept of a single nationwide licensee assumes that one system will satisfy the needs of all agencies and that is not possible. The FCC was innovative by allowing public safety to leverage the value of its newly allocated 10 MHz in exchange for capital investments from the private sector. However, many large cities have already begun designing and building broadband networks in other bands thus reducing the value of the spectrum to commercial enterprises.

One potential solution would be to encourage the FCC to revise the rules on distribution of the spectrum to allow cities and regions to determine the best way to proceed. Cities would then be free to use their 10 MHz to either build their own systems or negotiate with the private sector for an equitable exchange. As long as all 700 MHz systems, whether commercial or government-owned, are required to meet common design and interoperability standards the systems will meet current and future public safety needs. This would allow the FCC to designate spectrum to be auctioned on a regional basis to foster local partnerships with commercial entities to develop systems that will satisfy local public safety needs. Local commercial entities may be more likely to build highly adaptable systems responsive to the needs of the region.

Reconsideration of the D block allocation process will allow public safety entities to build in spectrum "green space" which will foster the development of systems based on new commercially available technology. Using clear spectrum in the 700 MHz band allows an entity to develop a new system without the need to retrofit existing sites and equipment. This "green space" approach is critical in areas such as New York City where moving from old but reliable legacy systems to new potentially cutting-edge solutions will require exhaustive testing to ensure the reliability first responders have come to, and have the right to expect. The region will be responsible to develop the system to standards that will ensure interoperability with other 700 MHz users on the regional and national level. Allocating the spectrum on a regional basis will encourage faster development of the necessary technologies by allowing the larger markets to drive the technology and standards. Emerging technologies such as CDMA and TDMA can be built to satisfy public safety requirements for resiliency and redundancy once the manufacturers embrace the public safety market.

The FCC has committed sincere and dedicated efforts to a range of areas, reflecting an agency aware of the challenges. Specifically, the rules governing the D block spectrum envisioned that the private sector would be more likely to share a large portion of prime spectrum and deliver advanced, interoperable wireless capabilities to public safety agencies across the country. By advocating a public-private partnership, the FCC recognized that public safety agencies could serve their missions better by leveraging commercial networks and services, and building and maintaining the systems to public safety requirements.

It made an important contribution in establishing the Public Safety Broadband Licensee to use the 700 MHz band to bring advanced data type services to all agencies. It allocated 700 MHz channels to voice communications for individual agencies yet the capacity falls far short of requirements faced by large metropolitan areas. We think it important that the voice and other narrowband requirements of public safety be addressed in an overall context, with advanced broadband services. The D Block can be the sources of technological incentives and public and private investment.

We urge the Congress and the FCC to move to a D Block model allowing public and private investment in the metropolitan areas, where the need and risk is highest, to work with the Public Safety Broadband Licensee, and establish a 700 MHz platform where the voice and data needs of public safety are addressed. This will create an ease of interoperability which, up until now, was not possible due to a lack of common public safety spectrum on a national level. Such an approach can promote nationwide efficiencies yet respond to local requirements. It will also provide the financial base and accountability to build and maintain a network. Our recent discussions with agencies in other metropolitan areas indicate an embrace of this path. With one or several agencies in a region deploying the infrastructure, in coordination with the PSBL, a much more pervasive use of the 700 MHz band is possible.

The model we propose is without bias to any technology or private interest and recognizes the crucial role the private sector has in bringing the concept to reality. It is intended to broaden the commercial interests serving the public safety sector and create incentives that allow technology to service voice and data needs, narrowband and broadband, from one platform. It seeks to capitalize on commercial solutions that preserve mission critical communications.

The model also envisions public private partnerships and private access to the spectrum where it can coexist with the primary public safety use. Yet in contrast to the original D Block auction framework, the mission critical requirements of public safety will be foremost and not compromised by a private entity that must first pay an enormous minimum bid. The auction premise imposes a constraint on the private partner to reduce its costs and commitment to the public safety sector. Either the mission critical standards are diluted or, as occurred, inadequate bids are received. It is also important not to lower the standard owed to public safety, such as providing public safety only "most favored nation status." The mission critical requirement will be abandoned. Public safety is then reduced to a commercial customer unable to uphold its own standards.

The public private partnership we propose envisions robust private partners committed to serving public safety's mission critical needs and pursuing the efficiencies that allow others to use and coexist in the spectrum. It also includes a recognition that public safety communications networks, like other local and state resources, contribute enormously to national security and preparedness and are deserving of investment and support by the federal government.

In summary, we urge the Committee and the FCC to structure use of the D Block where the mission critical needs of public safety communications can be the foremost responsibility of the public and private interests involved. We have already spoken to the radio system managers of both Chicago and Boston, who have expressed their support for this concept. The spectrum should not default to the private sector. Nor should it default to a specific use or technology. Large metropolitan areas, in coordination with the Public Safety Broadband Licensee, and entrusted with responsibilities paralleling the challenge, are capable of bringing about communications networks that parallel public safety responsibilities and expand use of the spectrum significantly and efficiently. Thank you for the opportunity to address these important issues; I will be pleased to answer any questions you may have.

Mr. MARKEY. Thank you, Chief, very much.

Our next witness is Steve Zipperstein, who is the vice president for legal and external affairs, general counsel and secretary for Verizon wireless, responsible for the company's legal regulatory compliance and Federal and State public policy matters. We welcome you, sir.

STATEMENT OF STEVEN E. ZIPPERSTEIN, VICE PRESIDENT AND GENERAL COUNSEL, VERIZON WIRELESS

Mr. ZIPPERSTEIN. Good afternoon, Chairman Markey, Ranking Member Stearns and members of the subcommittee. It is a privilege to be with you again to discuss the results of the 700 MHz auction and its important to the Nation's citizens and our economy. Thank you for this opportunity to share our views.

In the 9 months since I last appeared before the subcommittee, Verizon Wireless has hired nearly 12,000 employees, all within the United States, and invested more than $4 billion into our wireless network to expand and improve wireless services. American consumers expect these improvements, even in a tough economy, thanks to the historic competitiveness of wireless companies in our company. Simply put, if we don't stay ahead of the curve, consumers will leave us for one of our competitors. We are optimistic about the future.

Today I would like to discuss three important developments which together will drive innovation and economic vibrancy over the next several years. First, when the 700 MHz spectrum is deployed by us, by our current wireless competitors, and by the new wireline cable and satellite entrants, the results will be nothing short of transformative for this Nation. In the auction, Verizon Wireless won licenses for broad and deep spectrum to support a dizzying array of 21st century products and services for the American people, things we can't even begin to imagine today.

The second development involves the technology we will use to put the 700 MHz spectrum to work, technology known as LTE, or long-term evolution. The speed of this IP-based service will allow customers to enjoy connections matching the speeds of today's landline broadband networks. Customers, application developers and device makers are all excited at the promise of significantly improved wireless download speeds. Applications will not only be brought to market by Verizon Wireless but will come from the wave of innovation that LTE technology enables, especially in the realm of machine-to-machine applications. We see products such as wireless health monitoring, smart home management and location-based services as just three of the big categories that will benefit consumers but there are many, many others. Imagine automobile companies, for example, providing new software to cars over the air instead of requiring a visit to the shop.

The third element of how Verizon Wireless is transforming the wireless marketplace is through our open development initiative. Just a few short weeks ago, we successfully introduced our open development initiative to developers and others in the wireless ecosystem with more than 400 people live with us in New York City and thousands more via webcast. With a simple roadmap to bring the big dreams of developers to wireless users, new products and services should begin coming to market later this year. As we said to the development community when we launched this bold initiative last year, how about it.

Let us be clear, though. As I indicated to the subcommittee when I appeared here last summer, we didn't think it was necessary for the FCC to impose a fixed regulatory brand of openness on the 700 MHz spectrum. Dynamic, market-driven solutions such as our open development initiative and the open handset alliance will spur innovation far more quickly and efficiently than static regulatory mandates, especially in an industry as intensely competitive as ours. While Verizon Wireless is planning how best to use the 700 MHz spectrum and working with our minority owner, Votaphone, on global trials of 4G technology, large and small companies across the Nation are conducting similar strategic planning themselves. In 2008, we continue to battle with other wireless service providers in the marketplace every day but already the competition is lining up for tomorrow's 4G world. Of the total of 1,099 licenses for sale in the 700 MHz auction, Verizon Wireless bid on 615 and won only 109 of those licenses. We won about 18 percent of the licenses for which we bid and less than 10 percent of the total offered. Clearly, other companies are now set to offer services on their own 4G networks. There will be the four existing national wireless companies, us, AT&T, T-Mobile and Sprint Nextel, plus at least two new national competitors, the Cable Joint Venture and EchoStar. Regional companies including U.S. Cellular, Metro PCS, Cellular South and Leap Cricket all supplemented or expanded their existing footprints either with 700 MHz spectrum or AWS spectrum.

Wireless companies will have paid more than $30 billion to the U.S. Treasury for these two spectrum auctions, and as the technology industry has in the past, we will add billions more to the economy, building new coverage, improving existing coverage and upgrading to 4G networks. These investments will fuel the job creation innovation and robust competition that have been the hallmarks of the wireless sector for the past 2 decades.

Mr. Chairman, the auctions are now done. Now it is about the future. People with incredible new devices and applications will connect with each other and with the environment around them in ways we can only imagine. Deploying 4G networks on 700 MHz spectrum will unleash a host of new broadband devices and applications to rival anything available today on wired broadband networks and yet everything will be mobile. Verizon Wireless is pleased and honored to be a leader at this transformative juncture in our Nation's history.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Zipperstein follows:]

STATEMENT OF STEVEN E. ZIPPERSTEIN

Good morning Chairman Markey, Ranking Member Stearns and Members of the Subcommittee. It is a privilege to be with you once again this morning to discuss the results of the 700 MHz auction and its importance to the Nation's broadband future. Thank you for this opportunity to share our views.

THE TRANSFORMATION OF WIRELESS COMMUNICATIONS—FROM PHONES TO CONNECTIONS

Verizon Wireless considers the 700 MHz spectrum auction as nothing short of transformative for the nation and for the American consumer. This spectrum will allow our company and the wireless sector of the technology industry to accelerate growth, offering a broad array of 21st Century products and services to the American people, while still remaining intensely competitive.

The results of this auction, along with last year's Advanced Wireless Service (AWS) auction, demonstrate that a wide range of large and small players, plus several new entrants, are poised to deliver the benefits of 4G (Fourth Generation) wireless broadband services to Americans over the next few years. The competitors in the 4G world will include all four existing national wireless service providers (Verizon Wireless, AT&T, T-Mobile and SprintNextel), plus at least two new national competitors (the Cable joint venture, which acquired a 20 MHz nationwide footprint in the AWS auction, Echostar, which acquired a 6 MHz nearly nationwide footprint in the 700 MHz auction, and Cox Cable, which won over twenty licenses in large markets throughout the country in the 700 MHz auction), plus several regional carriers, such as US Cellular, MetroPCS, Cellular South and Leap/Cricket, all of which supplemented and/or expanded their existing footprints either with 700 MHz or AWS spectrum. In addition, CenturyTel, a regional landline service provider that exited the wireless business several years ago, has reentered the market by purchasing 700 MHz licenses largely overlapping its existing landline territory, enabling it to offer wireline/wireless bundles to its customers.

Taken together, wireless companies will have paid more than thirty billion dollars to the United States Treasury in these two 4G auctions (700 MHz and AWS). In the coming years our companies will add billions more to that amount as we invest the capital to build new coverage, improve existing coverage, and upgrade networks to new 4G standards such as LTE and WiMAX. These investments will fuel the job creation, innovation, and robust competition that have been the hallmarks of the wireless sector for the past two decades. The biggest winner, of course, will be the American consumer.

Verizon Wireless invested in the 700 MHz spectrum because we see an exciting and enormous future in wireless data growth—not only the products and services we know today, but those not even yet envisioned.

Wireless data growth is exploding. Text messaging took seven years to hit ten billion messages in a single month on the Verizon Wireless network, but then only seven more months to reach twenty billion messages in a single month to and from our customers (February 2008). Soon we will surpass one billion text messages per day on our network. Data revenues currently comprise more than 20 percent of our revenue, up dramatically from just a couple years ago. We can only imagine what the future has in store, but we are only at the beginning of tremendous growth in this area, with more opportunities and challenges than we can fully grasp.

Since the early days of wireless, companies have measured their growth by the number of customers. To begin to understand how wireless will grow in the future, we will need to move beyond characterizing the scope of the industry in terms of a percentage of the population, but instead to thinking about people, their devices and their connectedness. In other words, we need to think about the future in terms of “connections.”

The future is about people and their devices and their need to manage those devices-like digital media players, energy systems, appliances, medical devices. It is in these connections that we see tremendous opportunity for wireless innovation. Whether we think about people connecting with people, people connecting with their devices, or even devices connecting with other devices, wireless will become what some are calling “the third screen.” All the innovation that has been confined to the desktop and the TV screen will move rapidly to mobile environments, and the incredible connections that simply aren’t possible in a tethered world will become possible through products and services designed specifically to leverage the unique capabilities of advanced wireless technology.

Deployment of the 700 MHz spectrum will unleash a host of new broadband devices and applications to rival anything available today on wired broadband networks. Doctors will be able to access medical records and CAT scans wirelessly; firefighters will have wireless access to images of building interiors and floor plans. As a nation, we now have all the pieces in place to make that explosive growth happen, to move toward a broadband future that promises to improve the lives of Americans in many ways, to stimulate economic growth, and to establish our world leadership in wireless broadband deployment.

VERIZON WIRELESS’ PLANS TO DEPLOY 700 MHZ SPECTRUM

Verizon Wireless purchased 700 MHz spectrum to build on our unmatched network, widely known for having the highest quality and reliability in the nation. We have invested over $50 billion in our network over the past 8 years to ensure our customers continue to enjoy America’s most reliable wireless service. We were the first wireless company to deploy 3G technology in the United States, and we are excited to take that to the next level—4G. There are three key components to our overall wireless data and broadband strategy:

- The innovation and potential for new services that will be unlocked through our Open Development Initiative, which we announced prior to the auction start;

- The global reach and IP-based service inherent in the LTE platform we intend to deploy for our 4G products and services; and
- The depth and breadth of the spectrum won in the 700 MHz auction.

Verizon Wireless' Open Development Initiative. Our Open Development Initiative (ODI) invites third parties to develop devices and applications customers want that we do not currently offer. We announced this initiative last November because it made business sense for us to take the market in the next logical direction, primarily due to the explosive growth we have seen in data services. As I indicated when I appeared before the subcommittee last summer, we have never objected to dynamic, market-driven open access models. Instead, we did not believe it was necessary for the government to hard-wire its version of open access into the auction rules, inserting a fixed set of rules and a cumbersome and regulatory process into a fast-moving and constantly changing high-tech industry such as ours. With Open Development we are creating a market-driven model that can evolve and adapt quickly to the demands of customers, device and application developers, and others.

To implement this initiative, we hosted an Open Development Device Conference last month, at which we discussed the technical standards for devices other than those we sell in our stores to run on our network. The conference attracted enormous interest—more than 400 people attended in person, and thousands more watched the webcast in real time or have viewed it since. In the coming months, developers will begin submitting devices to third party labs to be tested and certified for operation on our network. We expect the certification process to take as little as four weeks to complete. Then, later this year, we will offer a "network-only" option for customers who wish to use these devices on America's most reliable network.

We are embracing Open Development because it will jumpstart the pace of innovation to the ultimate benefit of our customers. Open Development will spur innovation and expand customer choice of products and services available to run on our network. Those products and services will not be just wireless phones. The growth potential lies in connections—not only people-to-people connections, but connections of all kinds. Through this openness, we expect a virtual tidal wave of applications to move onto our network. Some of the ideas that developers are working on are already conceptualized, like medical devices and gaming consoles, but many have yet to be defined. This is the power of innovation that we expect Open Development to bring.

LTE as the path to 4G. The right technology is essential to enable the data opportunities ahead. To achieve the pervasive connectedness and to support the devices and media-rich opportunities of the future, the speed of wireless broadband networks will have to increase to allow connections to behave more like landline broadband networks. In LTE (Long Term Evolution) Verizon Wireless sees a unique opportunity to adopt a network standard with true global scale and compatibility with its existing technology. LTE promises improvements in download speeds, potentially in the range of 75 Mbps, bringing expanded device portfolio and service options that will include "machine-to-machine" communications and real time video. Verizon Wireless has chosen LTE to enable our future wireless network to operate at very high broadband speeds, benefiting customers with exciting new data products and services.

LTE technology will also offer the benefits of a global ecosystem. We are preparing to engage in trials with our minority owner Vodafone that will help define our global deployment strategies. Infrastructure equipment vendors, equipment manufacturers, carriers and others will be able to take advantage of the simplicity, efficiencies and economies of scale created by using a global standard. Scale economies will result in lower device and infrastructure equipment costs. Because of an increasing commitment by wireless companies both here and overseas to LTE as the preferred 4G technology, and fueled by the results of the 700 MHz auction, we expect to see an acceleration of the LTE standards, an acceleration of equipment delivery, and an acceleration of broadband applications reaching the marketplace.

700 MHz Spectrum Acquisition. The third prong is the spectrum we bid for during the recent 700 MHz auction. To compete effectively in the wireless data future envisioned in our Open Development initiative and to take full advantage of the capabilities of LTE, Verizon Wireless knew we needed greater depth and capacity in our spectrum holdings. We entered the auction with a clear set of objectives, based on what we knew was required to support our broadband strategy and provide a rich wireless offering to the American consumer.

Verizon Wireless is extremely pleased with the results of the auction. We aggregated several regional "C Block" licenses to form a nationwide footprint (with the exception of Alaska). On this strong foundation we added 102 smaller A and B block licenses, thus gaining additional capacity in key markets. We now have, on average, 85 MHz in the top 100 markets in the United States, where the greatest population densities put the most strain on network capacity. For years we have been the most efficient user of spectrum—serving 50 percent more customers per MHz than the industry average With this purchase, we have now increased our spectrum inventory to a level that puts us on par with our major competitors (except SprintNextel, which averages 123 MHz of spectrum in the top 100 markets) and have achieved the depth and breadth we need to preserve our hard-won status as providing the nation's most reliable wireless network. We can now move forward to the next wave of services and electronic devices that the enhanced data capabilities of our new network will make possible.

In addition to adding to our spectrum depth, the specific benefits of this spectrum purchase are many. The C block alone will give us 22 MHz of contiguous nationwide spectrum on a single frequency, giving us the capability to support the highest possible data speeds in a seamless nationwide service and optimize our 4G broadband deployment.

The nationwide C Block license also will provide for a seamless build-out and thus additional advantages in terms of speed, performance and capacity. As history has shown, aggregating spectrum post-auction takes many years and is costly to consumers. With the purchase of the C block we will be able to spend our time on broadly deploying the latest wireless broadband technology rather than aggregating spectrum.

While we stand by our position that the Commission's C Block "open access" rules were unnecessary, we are, of course, committed to live by the Commission's rules. Importantly, we believe the FCC's expectations for open access will be more than met by what will happen in the market generally and as a direct result of our open device initiative. We don't expect to be limited in any way by the FCC's definition of "open access," but rather will use it as a starting point for bringing incredible new products and services into the marketplace.

Verizon Wireless plans to launch its LTE network in 2010, only a short time after the 700 MHz spectrum is cleared. Once launched, we plan an aggressive and rapid build-out, upgrading our existing network infrastructure and moving to full deployment. We intend to fulfill the promise of the 700 MHz auction by putting this spectrum to use quickly and efficiently for the benefit of American consumers and the American economy.

Smaller Bidders and New Entrants Participated Successfully in the Auction

There are many reasons why the 700 MHz auction should be viewed as successful by federal policymakers acting on behalf of the American people. Our review of the data the FCC released after the auction reveals several important facts. Verizon Wireless purchased less than ten percent of the licenses for sale in the auction (109 of the 1,099 licenses offered), and our last bid in the auction occurred in Round 30, even though the auction continued for more than 230 additional rounds. As Chairman Martin noted in his statement at the close of the auction, 99 bidders other than the nationwide wireless companies won 69 percent of the 1,090 licenses sold in the 700 MHz auction. EchoStar, widely viewed as a new entrant, won 168 licenses in the E block to establish a near nationwide footprint for its consumer services. Another new entrant, Cox Cable, picked up 22 licenses in large markets throughout the United States.

Small and medium-sized wireless services providers also participated effectively in this auction. Many of the most successful B Block bidders were smaller, regional operators. For example, the second largest B block winner after AT&T was US Cellular's partner, King Street Wireless, L.P, which utilized the opportunities available for small businesses under the FCC's designated entity program to acquire a significant stake in the B Block (127 licenses) that overlaps and expand upon US Cellular's existing service areas in less densely populated areas of the United States. Cellular South also acquired licenses in the B Block that overlap and expand its existing service area. CenturyTel, which left the wireless business several years ago, is now reentering the market by acquiring spectrum that overlaps its local exchange areas. The fifth largest B Block winner, Triad, also an AWS licensee, though affiliated with several small wireless operators, appears to be a new entrant and a small business. Fourteen other small bidders won five or more B Block licenses. According to the FCC, of the 87 winning bidders in the B Block, 75 were new players winning licenses in 305 rural areas of the country.

Moreover, smaller companies had a fair opportunity to participate in the bidding. Because of anonymous bidding, we had no idea who we were bidding against during the auction. We were outbid on hundreds of licenses, and only won 16.6 percent of the licenses we bid for in the B Block and 17.4 percent of the licenses we bid for in the A block. Our post-auction analysis of the round-by-round data revealed that in the majority of cases where we were bidding head-to-head with small bidders in the B Block, we won after only one or two bids. The average price paid for licenses where we were bidding against a small bidder was $.55 per MHz pop, as compared to the overall auction average of $1.20 per MHz pop.

THE C BLOCK AND GOOGLE

Prospective new entrants—especially Google—had every opportunity to win the C block. Before Verizon Wireless placed its first C Block bid in round 27, nine of the twelve bidders that had placed a bid on a C Block Regional Area Grouping (REAG) had already ceased bidding or withdrawn their bids for C Block licenses, as Google had steadily driven up the price and eventually pierced through the reserve amount. By Round 30, Verizon Wireless became the high bidder in the C block, because the total of our bids on the individual REAG licenses exceeded Google's previously winning bid on the entire 50-state package. Although the auction continued for 230 more rounds, only one company chose to outbid Verizon Wireless on just the Alaska REAG license. Significantly, in the round just before it dropped out of the auction, Google could have topped our entire C Block bid for an additional amount of only $242 million, substantially less than the average value by which Google's market cap increased each Wall Street trading day throughout 2007.

Given Google's pre-auction clamor for a new entrant in the C block, Google's post-auction declaration that it never intended to win the C Block (or any other) spectrum is striking. While Google claims it would have tried harder to win the spectrum if only the FCC had mandated all four (instead of two) of the open access conditions it sought, that reasoning rings hollow, as Google obviously could have voluntarily implemented the same wholesale and net neutrality conditions it wanted the FCC to mandate. Google has now admitted that its sole objective was to bid just enough on the C block to trigger the open access rules, then exit as quickly as possible. As the New York Times put it in the headline to its April 4, 2008 story, this was "An Auction That Google Was Content to Lose."

Now Google has moved on, launching a new campaign to capture control of the so-called "white space" spectrum without, of course, having to pay for it at auction. The campaign initially provoked an outcry from the National Association of Broadcasters, and the wireless industry has recently added its strong objection. If scientific testing can demonstrate that the white spaces may indeed be used without causing interference to existing users, then they should be licensed and sold at auction, to ensure that American taxpayers are not left holding the bag.

PUBLIC SAFETY INTEROPERABILITY: NEXT STEPS

While the 700 MHz auction is generally viewed as a tremendous success, it did not achieve one important objective: it failed to produce a solution to address public safety's dire need for a nationwide, interoperable wireless broadband network. Not one of the more than 200 applicants saw sufficient economic justification in the D block experiment to bid remotely close to the reserve price in over 260 rounds of bidding. While Verizon Wireless believes that a public-private partnership may very well be an effective way to satisfy public safety's need for reliable and secure communications, we were not surprised with the result of the D block experiment. The vision was right, but the structure was fundamentally flawed.

The D block failed for many reasons. We spent a long time before the auction analyzing the D block rules, meeting with public safety and Cyren Call, and trying to construct a rational business case to justify the investment. Let me explain some of the reasons why Verizon Wireless chose not to bid for the spectrum and why we believe the D block auction failed.

First, the D block concept failed because its economics are fundamentally flawed. The idea behind the D Block was that someone would be willing to spend the money to build a network for public safety, in exchange for gaining access to public safety's adjoining spectrum. The problem with this approach is that the cost of building the network far exceeds the value of the spectrum. This would be true even if the network were built in accordance with typical commercial standards. It is doubly true when we consider the stringent rules the FCC established and the onerous requirements demanded by Cyren Call on behalf of the public safety licensee (The Public Safety Spectrum Trust).

Consider the minimum conditions the D Block licensee would have had to accept. It would have to construct, at its own considerable expense, a nationwide broadband network covering at least 99.3% of the U.S. population, and "hardened" to meet public safety's more rigorous requirements. The cost of constructing such a network would run to the tens of billions of dollars, and would substantially exceed the cost of constructing a comparable network built to typical commercial standards. Moreover, because public safety users would have priority use of the network, it would be difficult to estimate how much of the network's capacity would be available for commercial use on an everyday basis.

Thus, the D block structure was fundamentally flawed because it could not create enough value on the spectrum side of the ledger to make up for the overwhelmingly greater amount of capital the buyer would have to spend on the network. This value imbalance doomed the D block to failure.

Second, the D block failed because the rules created far too much uncertainty. The FCC's rules require the terms of the "network sharing agreement" to be negotiated after the commercial operator has already purchased the D Block license. This "buy now, negotiate later" approach is backward Far too many important details were left to post-auction negotiation, leaving prospective bidders in the position of not knowing what obligations they might be incurring. If the negotiations failed to produce an agreement acceptable to public safety and the FCC, the D Block winner would have to forfeit the license, and pay a penalty in an amount equal to ten percent of its winning bid plus the difference between the winning bid and the amount the FCC would collect in a subsequent auction of the D Block—an enormous "break-up" fee. While the FCC's default penalty rule is normally necessary to curtail speculators, it represents a huge financial risk for serious prospective D Block bidders, especially given the great uncertainty inherent in waiting until after the auction to conduct negotiations with public safety. Is it any wonder that buyers were reluctant to step forward under such circumstances? But even if many of those details had been known, the economic imbalance discussed above would still have caused prospective bidders to stay on the sidelines.

Third, Cyren Call's role created much uncertainty. The Public Safety Spectrum Trust, which holds the public safety broadband license adjacent to the D block, selected Cyren Call, a for-profit entity, as its advisor last October. Verizon Wireless met with Cyren Call, as did other prospective bidders. In these meetings, Cyren Call indicated that the D Block licensee and the Public Safety Spectrum Trust would act as a public-private partnership. But the more we heard Cyren Call describe how that partnership would work, the more concerned we became with the viability of the endeavor. For example, Cyren Call indicated the D Block licensee would not be allowed to recoup its capital investment through the rates it charged public safety users for network access. Cyren Call said this requirement was justified, because public safety would be contributing a portion of its adjoining spectrum for the D Block licensee's use. But Cyren Call also stated that the D Block licensee would have to pay the Public Safety Broadband Trust a $50 million annual "spectrum lease payment" for using that same adjoining spectrum. Cyren Call said the payment was necessary to cover the expenses of the Public Safety Broadband Trust.

Moreover, we were very surprised when Cyren Call indicated that the D Block licensee would not have the ability to serve public safety users directly. Instead, Cyren Call and the Public Safety Spectrum Trust would "own" the right to provide service to public safety users by reselling service on the D Block licensee's network. Cyren Call also took a broad view of the term "public safety users," defining it to include not just first responders, but other state and local government employees and certain commercial users who interface regularly with first responders (for example, ambulance drivers, utility workers, transport workers, etc.) This raised serious concerns. Verizon Wireless currently serves hundreds of thousands of federal, state and local public safety users with no middleman, and we do not believe one is necessary to provide service to such customers in the future.

For all these reasons, we chose not to bid for the D block.

Despite the D Block's many flaws, we continue to believe that public safety can benefit when government and commercial interests develop effective partnerships. We see examples of such partnerships every day, in areas ranging from the manufacture of fighter jets and submarines for the military to the construction and operation of advanced telecommunications solutions for government agencies. These partnerships are effective because the requirements and expectations are clearly defined up front, because potential partners are solicited through transparent and competitive processes, and because both the government and the commercial entity have an opportunity to assess fully the benefits and risks. Using such an approach to develop a nationwide, interoperable broadband wireless network for public safety's use would enable both the government and the private sector to avoid the tremendous uncertainties inherent in the D Block model, while offering a far broader range of potential partnership arrangements for public safety to consider.

Thus, the question that should be asked is not necessarily "what should we do with the D Block?" The more important question is "what should we do to ensure our nation's first responders have access to effective, reliable, interoperable communications in times of emergency?" The D Block "conditioned license" approach is clearly not the solution, as the auction results made so abundantly clear. It is economically flawed and fraught with uncertainty and risk—both for public safety and the commercial operator. Any new proposal that simply tinkers with the D Block rules around the edges but maintains the same, fundamentally flawed and imbalanced model of trading spectrum value for capital investment likewise will fail. Indeed, whether the D Block spectrum even needs to be part of the interoperability solution is something that Congress and the FCC must evaluate, as part of a more thorough assessment of public safety's needs and the role that a true public-private partnership could play in meeting those needs.

The advanced technologies that will facilitate real solutions for public safety are readily available today. The substantial assets of the private sector, both in expertise and existing infrastructure, can help accelerate deployment of these solutions. What is needed is a partnership framework that provides the proper incentives for private sector participation, a clear description of public safety's requirements, and sufficient funding to ensure the plan can be implemented successfully.

Thus, whether the D Block needs to play any role in creating a successful public-private partnership is a question that should be studied thoroughly. If Congress determines that the D Block must still play a role in this process, then other possibilities should be considered, such as reallocating the D Block to public safety, or auctioning it free and clear of any conditions (except the same build out conditions applicable to the lower A and B blocks should apply) and earmarking the proceeds to fund interoperability, rather than continuing to rely on a flawed framework that is doomed to failure.

As we move forward, Verizon Wireless remains committed to helping find and being a part of a solution to public safety's need for interoperable communications. We already operate the nation's most reliable wireless network, and in the not-too-distant future we will augment that network with 700 MHz spectrum and LTE technology, delivering new products and applications with tremendous speed and versatility to our customers. And, through our Open Development Initiative, we are welcoming niche and specialty devices, including those designed specifically to serve public safety needs. We stand ready to continue serving public safety in every way we can.

CONCLUDING THOUGHTS: THE NEED FOR REGULATORY, TOWER SITING AND TAX REFORM

With the 700 MHz auction behind us, now is the time to focus anew on the need to take firm action to ensure the dreams of a wireless broadband future can be fully realized for the American economy and American consumers. It is vital that we not allow backward-looking, state-by-state utility style regulation to undermine the investment and innovation necessary to our 21st Century broadband future. As I noted during my appearance before the Subcommittee last summer, it is critically important that we move forward to implement a national framework for wireless regulation, with a single set of federal consumer rules comprising both the floor and ceiling. The States must play a role in enforcing those rules, but not in piling on multiple, inconsistent and conflicting rules of their own. We will be pleased to continue working with the Subcommittee to achieve this important goal.

Equally important is the need to streamline the antiquated and burdensome local approval processes for deploying network facilities. Local governments should retain their role in approving new cell towers, but the process must be streamlined with reasonable deadlines and requirements for local authorities to identify alternative acceptable sites.

Finally, I would be remiss if I failed to mention on this day—April 15—that wireless customers continue to be singled out for unfair, discriminatory and burdensome state and local taxes. It is imperative that policymakers relieve the burden of these taxes and help make wireless service more affordable for more Americans.

Thank you again for the opportunity to appear before the Subcommittee to address these important issues.

Mr. MARKEY. Thank you, Mr. Zipperstein.

Our next witness is Robert Irving. He is the senior vice president, general counsel and secretary for Leap Wireless International and its wholly owned subsidiary, Cricket Communications. Mr. Irving is responsible for the supervision of all of Leap's and Cricket's legal affairs.

STATEMENT OF ROBERT IRVING, SENIOR VICE PRESIDENT, GENERAL COUNSEL, LEAP WIRELESS INTERNATIONAL, INC., CRICKET COMMUNICATIONS, INC.

Mr. IRVING. Chairman Markey, Ranking Member Stearns, members of the subcommittee, Cricket is a mid-sized carrier that offers customers unlimited service for a flat monthly rate. We designed our business to provide high-quality, high-volume and low-cost service to customers who are underserved by many other providers. Although we launched Cricket 10 years ago, our service incorporates many of the features that are included in your consumer protection bill today. Our month-to-month service does not require customers to enter into long-term contracts. We have no early termination fees. We don't require our customers to pass credit checks or place deposits for our service. As a result, our customer demographics are unique. Sixty-two percent of our customers are minorities, predominantly Hispanic and African-American. Fifty-seven percent of our customers make less than $35,000 a year and 62 percent of our customers are under the age of 62—excuse me—under the age of 35.

Cricket is growing rapidly. We offer service in 23 States to more than 3 million customers. We help lower prices to consumers when we enter a new market, and unlimited plans, which we spearheaded in 1999, have recently been introduced by a number of prominent carriers. Cricket was the first carrier to advocate number portability and we also opposed the removal of spectrum caps. Small, mid-sized, and rural carriers like Cricket create additional competition and increased choice for consumers. We also add to vigorous policy debates.

We and our partners purchased approximately $1 billion of licenses in the AWS auction. We launched Oklahoma City, one of the first AWS markets in the Nation, last week, and we are looking forward to launching additional markets in 2008 and 2009 including markets in committee members' districts like Chicago, and before too long, Washington and Baltimore. So we will send you all phones in the near future.

We are working with government agencies to clear the AWS spectrum so we can bring our unique service to additional underserved consumers. However, consolidation of spectrum and market power in the Nation's largest wireless carriers threatens the innovation, growth and increased choice that small and mid-sized carriers bring to consumers.

In the 700 MHz auction, the Nation's two large carriers significantly increased their spectrum holdings and purchased more than 70 percent of the licenses by megahertz pop. Cricket believes policymakers can and should take additional steps to help introduce new entrants and new competition into the marketplace.

With respect to the issues before the committee today, Cricket has several recommendations to promote competition in a continued vibrant wireless arena. First, policymakers should ensure that automatic roaming is available to customers on reasonable terms and without an in-market exception. Automatic roaming is the safety net that provides seamless coverage to consumers. Imagine a parent who is traveling when her family experiences an emergency. She needs to communicate even if she is outside of her home market. Roaming has been a standard industry practice for decades and it should be available to consumers today without the in-market exception contained in the FCC's rules.

Second, to allow small, mid-sized and rural carriers to continue to vigorously participate in future auctions and to facilitate new entrants and increased competition, we recommend that future auctions focus on smaller geographic service areas such as EAs, which were used in the B band for the 700 MHz auction. In addition, policymakers and wireless providers need to engage in a comprehensive review of the 700 MHz D block rules as we have discussed today. The proposed safety rules require the D block licensee to commit enormous resources but the rules for the road were uncertain and the public safety licensee had significant negotiating discretion, which made an investment commitment in this block very risky. We need to review together how we can clarify the proposed public-private relationship so that one or more carriers can determine how they can serve the public interest in the D block and at the same time earn a reasonable profit in this new public-private opportunity.

Thank you very much for your attention.

[The prepared statement of Mr. Irving follows:]

LEAP®

Written Testimony of

Robert J. Irving, Jr.

Senior Vice President and General Counsel

Leap Wireless International, Inc. and Cricket Communications, Inc.

Before the

U.S. House of Representatives Subcommittee on

Telecommunications and the Internet

Committee on Energy and Commerce

On

Tuesday, April 15, 2008

cricket
communications

Chairman Markey and Members of the Subcommittee, thank you for the opportunity to testify before you on behalf of my company, Leap Wireless International, Inc. ("Leap"), and its wholly-owned subsidiary Cricket Communications, Inc. ("Cricket"). Leap is a mid-sized wireless carrier striving to offer innovative and affordable wireless service to customers and demographics that have long been under-served by traditional wireless telecommunications carriers. Leap is pleased today to offer its perspective on various spectrum policy issues that you are exploring in the context of the Federal Communications Commission's ("FCC's") recently-completed 700 MHz auction.

I. INTRODUCTION TO LEAP WIRELESS AND CRICKET COMMUNICATIONS

I would first like to note for the Subcommittee where Leap fits within the ecosystem of U.S. wireless carriers, and explain briefly why our company is unique. We are a mid-sized carrier that offers digital wireless service through Cricket under the Cricket® brand. Cricket offers customers unlimited wireless service for a flat monthly rate without requiring a fixed-term contract, credit check or early termination fee.

Leap's services are designed for customers whose basic and advanced wireless needs have not been met by traditional communications companies, and Leap has a unique customer base relative to the average mobile phone user. Based on company surveys, Cricket customers talk an average of 1,500 minutes per month — more than double the wireless industry average. And 65 percent of Cricket customers have "cut the cord" and rely solely on Cricket for their phone service. By comparison, according to a Yankee Group survey, twelve percent of all other U.S. wireless subscribers rely solely on their mobile phone. In addition, 93 percent of Cricket customers reported their Cricket phone was their primary phone, compared to just over half of traditional wireless customers.

But perhaps what makes Cricket most unique is the diversity of our customer base. 62% of Cricket customers are minorities, predominantly Hispanic or African-American, compared with just 17% of traditional wireless carriers. Additionally, 57% of Cricket customers report that they make less than $35,000 per year, whereas just 20% of other wireless carriers report the same. And Cricket customers are relatively young – 62% of Cricket customers are younger than 35 years of age, while the industry average is 39%.

In general, it is fair to characterize Leap as part of the vanguard of wireless carriers leading the development of new product and service approaches, and expanding wireless service coverage to constituencies that may not heretofore have had access to wireless service.

II. THERE IS A CONTINUED NEED FOR ACCESS TO SPECTRUM TO SPUR COMPETITION AND INNOVATION FROM SMALL AND MID-SIZED CARRIERS, AS WELL AS NEW ENTRANTS

As a provider of wireless telecommunications, radio spectrum, of course, is the raw material on which we have built our business. It is the resource that our company requires to survive and expand. Historically, Leap has been a strong supporter and participant in FCC spectrum auctions, participating significantly in various Personal Communications Services ("PCS") auctions (for example, Auction Nos. 22 and 58), and last year investing almost one billion dollars in the FCC's auction of Advanced Wireless Services ("AWS") licenses (Auction No. 66). Unlike many other carriers, Leap presently is investing significant additional resources to clear AWS spectrum of incumbent federal government users and to launch service in new markets as quickly as possible. In fact, Leap launched service on AWS spectrum just last week in Oklahoma City, Oklahoma, and has announced aggressive plans to launch several more AWS markets in 2008.

For Leap and consumers generally, all of these investments are paying off in terms of new competition and innovation in the wireless marketplace. As of December 31, 2007:

- Cricket service is offered in 23 states to more than 3 million customers;
- Cricket and two joint ventures that also offer Cricket service own wireless licenses covering an aggregate of 186.5 million POPs; and
- the combined network footprint in Cricket's operating markets covers approximately 54 million POPs.

We believe this kind of growth, combined with our unique customer demographics, is illustrative of the kind of wireless competition that Congress and the FCC desire to promote. Leap disciplines prices in every new market that it enters, and indeed, we believe that the recent proliferation of more choices in terms of flat-rate pricing plans from some of the traditional wireless carriers is directly attributable to our presence.

Nonetheless, we have been concerned in recent years with the ever-increasing consolidation of spectrum assets and market share into the hands of the nation's largest wireless carriers, and the consequences that this portends for Leap and other small and mid-sized carriers. As expert economists observed on the eve of the commencement of the 700 MHz auction, since the removal of spectrum caps in 2003, the commercial mobile radio services industry in the United States has steadily consolidated, with two firms – AT&T and Verizon (ironically the eventual dominant winners in the auction) – accounting for 53% of all industry revenue, and four firms accounting for 90%.[1]

At Leap, we thrive on competition – but we must have access to spectrum in order to continue to compete and innovate. Furthermore, as the data bandwidth demand from users increases with the deployment and use of new innovative wireless applications, new technology will need to be deployed. As an example, in 4G wireless broadband solutions, the data bandwidth increases, and the cost to deliver data decreases proportionally, with the increase of available spectrum. Some estimate that 4G wireless broadband will require access to at least 20 MHz of spectrum to provide optimized and cost-effective wireless service. Thus, smaller competitive carriers will need to upgrade their networks and obtain access to more spectrum in order to remain viable.

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[1] P. Crampton, A. Skrzypacz and R. Wilson, "The 700 MHz Spectrum Auction: An Opportunity to Protect Competition in a Consolidating Industry" (November 13, 2007), at 2.

Furthermore, as I will touch upon below, the nation's largest wireless carriers are not only gaining tremendous positions in increasingly scarce spectrum assets, they are also in many cases denying automatic roaming altogether or on reasonable terms to other wireless carriers, in an effort to weaken the service offerings of their competitors, and in spite of the fact that they relied on such agreements to expand their own networks.

As Congress and the FCC continue to monitor the wireless marketplace, we believe it is critically important to remain vigilant with respect to auction and service rules, and aftermarket transactions, which threaten competition in the wireless marketplace.

III. LESSONS FROM THE 700 MHZ AUCTION

Lessons learned from the 700 MHz provide examples as to why such vigilance is required. By some measures, the 700 MHz auction was successful. The auction raised a record $19.592 billion for the U.S. Treasury. It also was laudably ambitious in its attempt to advance wireless policy objectives in new ways, experimenting with new auction procedures on a grand scale, and introducing new service rules on the C Block intended to advance open platform policies.

But the 700 MHz auction also exhibited — and amplified — deeper, disturbing trends in wireless. The nation's two largest carriers, Verizon Wireless and AT&T, significantly increased their vast spectrum holdings and accounted for approximately $16.3 billion of the approximate $19.6 billion of all auction proceeds. In the mean time, mid-sized carriers were virtually shut out of the 700 MHz auction: Leap and Alltel won no licenses, while MetroPCS obtained one.

In this auction, in retrospect, there were limited bidding opportunities for small and mid-sized carriers, and little headway was made in introducing new entrants and new competition in wireless. The creation of large geographic areas in the 700 MHz C Block, along with the use of combinatorial bidding procedures for these licenses, made it difficult for smaller and mid-sized carriers to gain access to this prime spectrum.

Leap believes that future auctions can strike a better balance in advancing the Congressionally-mandated goals of avoiding excessive concentration in the assignment of radio spectrum licenses, and of disseminating mutually exclusive spectrum licenses among a wide variety of applicants.[2] This is an important policy goal because, in the longer term, the opportunities on the horizon for small and mid-sized carriers to gain access to spectrum, either in an auction or in the aftermarket, will be fewer and fewer.

IV. MEASURES TO PROMOTE FURTHER WIRELESS INDUSTRY COMPETITION

As Congress and the Commission debrief together and with industry with respect to wireless spectrum trends and policies, Leap has at least three recommendations that it believes would preserve and promote continued competition and innovations in wireless.

A. Comprehensive Review of the D Block

First, Leap supports a comprehensive "top-to-bottom" review of policies and service rules surrounding the 700 MHz D block. There is no question that the complex public/private partnership framework surrounding this spectrum block, and features such as the extremely stringent geographic build out requirements, made this spectrum highly unattractive even to the auction's very largest participants.

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[2] 47 U.S.C. § 309(j)(3),(4).

Leap believes that the public interest would be well served by reconsidering how to best serve the needs of public safety users, and how those needs can be made to mesh better with the investment and operational requirements of the commercial sector. For example, Congress and the FCC should examine whether breaking the D Block into smaller licenses makes better policy sense. If it preserves a public safety component to this spectrum, the FCC should consider allowing several different network providers to work with the public safety community. The Commission should also explore whether its aggressive buildout requirements for this spectrum should be retained, and most important, whether Verizon or AT&T should be able to bid for this spectrum in the future, given the significant 700 MHz assets they have already procured.

B. Future Use of Smaller Geographic Service Areas

Second, the 700 MHz auction results plainly demonstrated that the lion's share of spectrum carved into large geographic regions quickly move beyond the reach and resources of small and mid-sized bidders at auction.

Leap believes that in future auctions, balance among bidder interests will be far better served by licensing spectrum blocks uniformly on an Economic Area ("EA") basis. 176 EAs will ensure that larger carriers begin with area sizes that make sense as a starting point for aggregation, while smaller carriers will still be able to gain access and compete at auction on a much more meaningful basis than large regional areas or nationwide licensing allow.

C. The Need for Automatic Roaming Without Exception

Third and finally, there is a real basis for concern that the continued aggregation of spectrum resources will only exacerbate anti-competitive behavior by the nation's supercarriers, and in particular, anti-competitive roaming practices. This is a related problem that Congress and the FCC must consider as they examine wireless and spectrum policy issues flowing from recent auctions.

Automatic roaming agreements play a critical role in filling the inevitable gaps that exist in *every* carrier's network – they form the "safety net" that permits all consumers to obtain geographic wireless service coverage. Last year, the FCC appeared to affirm the importance of automatic roaming, but crafted an "in-market" exception that allows a carrier to refuse roaming service in any area where the requesting carrier merely has spectrum usage rights – regardless of the time it takes to build out particular markets, or indeed, whether it is even possible to build out licensed spectrum.[3]

The presence of this in-market exception may have had direct consequence on small and mid-sized bidder behavior in the 700 MHz auction. Non-nationwide carriers knew that they could be risking the viability of their current roaming agreements by acquiring spectrum usage rights in new markets – a sub-optimal public policy outcome from an auction and competition standpoint. More generally, carriers small and large, rural and urban, incumbent and competitive,[4] have agreed in connection with pending reconsiderations of the roaming rule that the FCC should close this loophole, which threatens to make the automatic roaming obligation on the books all but meaningless. Tellingly, only Verizon and AT&T support affirmance of the current rule.

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[3] Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers, WT Docket No. 05-265, *Report and Order and Further Notice of Proposed Rulemaking*, FCC 07-143 (rel. Aug. 16, 2007), *summarized at* 72 Fed. Reg. 50,064 (Aug. 30, 2007) ("*Roaming Order*").

[4] Carriers and organizations supporting elimination of the in-market exception include Leap, MetroPCS, Sprint, T-Mobile, United States Cellular Corporation, SpectrumCo (a joint venture that includes cable operators Comcast, Time Warner and Cox), Southern Linc, the Organization for the Promotion and Advancement of Small Telecommunications Companies ("OPASTCO") and the Rural Telecommunications Group.

As Congress and the FCC evaluate events like the 700 MHz auction, where the increasing market power of the nation's largest wireless carriers is in profound evidence, it should consider the further implications for wireless consumers that require roaming services. The "safety net" that ubiquitous roaming promises is more than just a metaphor for ensuring seamless coverage. Without an automatic roaming obligation, for example, there is no guarantee that consumers traveling outside their carrier's facilities footprint will receive emergency alerts, as they ride on the SMS platform. Whether it is seeking help with car trouble—or even contacting family and receiving critical information in the wake of a hurricane or terrorist attack[5]—no consumer "should have to see the words 'No Service' on their wireless device"[6] in a time of need. Consumers simply should not be stranded when they travel away from "home."

Anticompetitive roaming practices lead to supra-competitive prices that harm all consumers but disproportionately burden disadvantaged and rural populations. In the end, the in-market exception encourages such practices, forcing consumers to pay more for less coverage.

And the same of course is true for data roaming. The 700 MHz spectrum is well-configured for broadband wireless service delivery, but concentrated in the hands of the nation's two largest carriers, the prospect of new wireless broadband competition emerging from the use of this spectrum is remote. Furthermore, such concentration will increase incentives for these largest of carriers to pull back even further in supporting roaming activity from competitive network providers. Automatic roaming for data services is integral to future wireless competition – and again, with no "in-market" exceptions.

I urge to you to take an active role in considering these vital consumer issues.

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[5] *See Roaming Order*, Statement of Commissioner Deborah Taylor Tate (roaming can benefit "public safety, or even homeland security").

[6] *Roaming Order*, Statement of Commissioner Jonathan S. Adelstein, Approving in Part, Concurring in Part.

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Chairman Markey, I thank you and the Subcommittee again for allowing Leap to express its views on these important topics.

Attachment A

Written Testimony of Robert J. Irving, Jr.
Senior Vice President and General Counsel
Leap Wireless International, Inc. and Cricket Communications, Inc.

Summary of Points

- Leap/Cricket is a mid-sized carrier that offers customers unlimited digital wireless service for a flat monthly rate without requiring a fixed-term contract, credit check or early termination fee.

- Leap/Cricket demographics are unique: 62% of Cricket customers are minorities, predominantly Hispanic or African-American; 57% of Cricket customers make less than $35,000 per year; 62% of Cricket customers are younger than 35 years of age.

- Leap is representative of the kind of competition that small and mid-sized carriers bring to the wireless marketplace. Leap is growing rapidly, offering service in 23 states to more than 3 million customers, but it requires additional spectrum in order to continue to grow, innovate and compete. Consolidation of spectrum and market power by the nation's largest wireless carriers threatens such growth, innovation and expansion.

- In the 700 MHz auction, the nation's two largest carriers, Verizon Wireless and AT&T, significantly increased their vast spectrum holdings and accounted for approximately $16.3 billion of the approximate $19.6 billion of all auction proceeds. Overall, policymakers should take additional measures to introduce new entrants and new competition into the wireless marketplace.

- As Congress, the FCC and industry debrief on where to go from here, Leap encourages all to be mindful of measures that could promote competition in the future. These include:

    - ❖ A comprehensive review of the 700 MHz D Block

    - ❖ More prevalent use of smaller geographic service areas, such as Economic Areas, in future auctions

    - ❖ Elimination of the "in-market" exception to the automatic roaming obligation, which is (i) uniformly opposed by the wireless industry except for AT&T and Verizon; (ii) vital to protect the "safety net" of consumers' ability to enjoy seamless wireless coverage, and (iii) threatened by these supercarriers' massive additional increases in spectrum as a result of the 700 MHz auction.

Mr. MARKEY. Thank you, Mr. Irving.

Our next witness, Harold Feld, is the senior vice president of the Media Access Project, a nonprofit public interest telecommunications law firm. Welcome, sir.

STATEMENT OF HAROLD FELD, SENIOR VICE PRESIDENT, MEDIA ACCESS PROJECT

Mr. FELD. Thank you, Mr. Chairman. I am pleased here to represent not only Media Access Project but also the Public Interest Spectrum Coalition, a broad coalition of citizens' groups such as Public Knowledge and Free Press, think tanks such as New America Foundation, civil rights organizations, consumer organizations and organizations representing higher education. and open software developers for open spectrum.

The tragedy of our spectrum policy is that it has been reduced to four words: show us the money. As you have pointed out so cogently in your opening statement, the statute has high hopes for what we can do with spectrum auctions. The public interest goals that were laid out by Congress in 1993 when it first adopted the spectrum auction statute tell us that we deserve a world in which everyone has access to wireless opportunities, to the economic advantages that wireless technologies can bring, and in particular, women- and minority-owned businesses and rural businesses which for historic reasons have been denied access to capital or licenses deserve a fair shake in these auctions. But instead, our auction policy has become about maximizing revenue and not picking winners.

As Chairman Martin observed, we supported a number of things that were designed to bring in new competitors into the C block auction, the large size of the C block band, package bidding, things that on reexamination may in fact have hindered the efforts of new competitors or competitors such as Leap to acquire spectrum. But there was a reason why we went with the second-best alternative. It was because in this environment, the FCC could not adopt the things that it needed to adopt. PISC urged the FCC to adopt some kind of spectrum cap or other exclusion, which would have prevented any companies from monopolizing too much of the public airwaves. We asked for wholesale obligations on the spectrum so that in every market there would be an opportunity for new entrants and entrepreneurs to have access to needed spectrum services.

There were some positive steps that were taken. The C block open device condition is one small but much-needed step forward and it seems to have had a positive effect on the market but it is far, far too early to declare mission accomplished. The fact is that the FCC should be granting the Skype petition, not dismissing it, and what is astounding is that there is an effort to make even this weak tea of openness appear to be powerful poison that drove away bidders and robbed companies like Leap of the opportunity to bid on B block spectrum. For reasons I have set forth in my testimony, I find the statements of AT&T self-serving. I find the likelihood that this depressed auction values somewhat skeptical and I find the notion that this drove bidders to B block who would not otherwise have been in B block bordering on the absurd. The fact is that Verizon paid $9.6 billion or so for this spectrum. They came prepared to play. If they had been outbid in C block, they would have gone to B block like AT&T did.

But let us pretend for a moment that AT&T is right, that they are willing to pay billions of dollars to avoid an open device condition. They are a profit-maximizing firm. Where do those billions of dollars come from? They come from me, they come from you, they come from every American who is paying hundreds of dollars for instant messaging if they have teenage children, perhaps thousands of dollars if they have teenage children, it comes from Americans who are paying dollars for ring tones that cost pennies in Europe and it comes from the innovators who want to provide new services. They get it from the sky decks and the RBTLs who are denied entrance, and worst of all, the grant of control over these networks imperils our vital free speech interests.

We may remember when narrow was denied a short code. That decision was reversed within 24 hours because of publicity, but should the free speech rights of Americans really depend on a company's desire to avoid a PR disaster? In the spirit of the Passover holiday, I ask please let our people go. Open the potential of the spectrum. We can begin rethinking this with the D block where we again ask that wholesale be introduced as a condition to provide much-needed spectrum. We also say that the FCC should move quickly to grant rather than dismiss the Skype petition and to open up the potential of the white spaces.

I have personally seen what can be done in rural America, what can be done in the inner cities of San Diego and Chicago, what can be done with university partners in Champaign Urbana when we open up the spectrum and open up the edge to the innovation and the power of millions of inventive Americans.

It was the prerogative of kings to sell licenses for monopolies, taking their cut up front while people squeezed the last mark and kopek out of the peasants. We should not have to live here as peasants in the land of the free. These should be public trusts held by responsible corporations making an honest living but not squeezing the last penny out of us for ring tones, instant messages and putting the squeeze on Silicon Valley if they want to access the wireless platform.

Thank you.

[The prepared statement of Mr. Feld follows:]

TESTIMONY OF
HAROLD FELD
SENIOR VICE-PRESIDENT, MEDIA ACCESS PROJECT
ON BEHALF OF
THE PUBLIC INTEREST SPECTRUM COALITION

Delivered to the
Subcommittee on Telecommunications and the Internet
of the
Committee on Energy and Commerce
United States House of Representatives

OVERSIGHT OF THE FEDERAL COMMUNICATIONS COMMISSION-THE 700 MHz AUCTION

April 15, 2008

Good morning. My name is Harold Feld. I am Senior Vice President of the Media Access Project (MAP). For more than 35 years, MAP has served as a non-profit law firm and public advocate to provide a voice for the public interest in our communications policy. Today, I am pleased to represent the Public Interest Spectrum Coalition (PISC), a broad coalition of citizens groups such as Public Knowledge and Free Press, think tanks such as New America Foundation, civil rights organizations, consumer organizations, and organizations representing higher education.[1]

EXECUTIVE SUMMARY

The 700 MHz Auction was both the most successful auction in FCC history and perhaps the worst failure in Communications policy in recent memory. The paradox is possible because the FCC, and sadly, not a few members of Congress as well, have reduced the entire public interest analysis for auctions to four words: "show us the money." The auction statute gives a lengthy list of public interest goals: increasing competition and avoiding "undue concentration of licenses;" promoting ownership opportunities for small businesses - especially rural, woman owned, and minority owned businesses; and providing to all Americans the economic and social benefits of wireless. To these we added to the hopes for the 700 MHz auction the creation of a wireless "third pipe" broadband provider to keep with the broadband cable modem service and DSL duopoly that controls over 90% of the residential broadband market. Finally, we expected the D Block public/private partnership with public safety to build the national, interoperable broadband public safety network that the 9/11 Commission and everyone else agrees we need.

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[1] PISC's membership, in alphabetical order: The CUWiN Foundation (CUWIN), Consumer Federation of America (CFA), Consumers Union (CU), EDUCAUSE, Free Press (FP), Media Access Project (MAP), the National Hispanic Media Coalition (NHMC), the New America Foundation (NAF), Public Knowledge (PK), and U.S. PIRG.

None of that happened.

The auction raised over 19 billion dollars. It may have given DBS provider Echostar a boost for providing new video services. And the C Block condition may finally give subscribers to Verizon a chance to connect their own devices to the portion of Verizon's network that uses the C Block spectrum – depending on how firmly a future FCC enforces these conditions.

That's it. No third pipe. No new wireless competitors. Instead, the auction simply cemented AT&T and Verizon's position as the dominant wireless companies, free to integrate the spectrum most suited for wireless broadband with their existing wireless and wireline assets. The two companies jointly paid $16 billion dollars in exchange for staying top dogs of the wireless world for the foreseeable future. A great deal for AT&T and Verizon, but a rather nasty deal for the American people. And to make matters worse, we didn't even get the public safety network built.

Predictably, everyone has a favorite villain to blame and a cure that fits with their business model. It's Kevin Martin's fault for pushing the C Block band plan and adopting the "open device" condition that forced AT&T to beat up on MetroPCS, Leap, and the other second tier providers. It's Morgan O'Brien's fault for being too aggressive with potential bidders and scaring off the money. So all we have to do is yell at Kevin Martin to stop trying to regulate the "wildly competitive" wireless market, slap Cyren Call on the wrist, and we can fix everything.

I wish it were that simple. But, as usual, the truth is far more inconvenient. We got the auction results we deserve because the FCC and Congress absolutely refused to "pick winners" or do anything that might jeopardize the auction revenue. Where the FCC actually tried to do its job on the public interest side – such as with the open device condition on C Block or the public/private partnership on D Block – it faced stiff resistance and had to adopt outrageously high reserve prices to protect the auction revenue. The FCC – at the urging of many members – absolutely refused to adopt any rules that would exclude incumbents or make it easier for new entrants. It was no surprise that the players with the greatest ability to "extract value" from the licenses and pockets deep enough to outbid anyone else, *i.e.*, AT&T and Verizon, won the licenses. As Woody Allen once observed, "the race is not always to the swift, nor the battle to the strong, but that's the way to bet." If you structure an auction to maximize revenue and refuse to "pick winners," you can hardly complain when the biggest wireless companies win again and again and again.

If we don't like the world created by the 700 MHz auction and our wireless polices over the last ten years, ***we need to change our policies***. To get competition, we must "pick winners." To get open networks, we must have rules that force companies to open their networks. If we want to see a real public/private partnership for our public safety network, we need to worry less about how to get at least a billion dollars for the commercial side and spend more time thinking how to make that public/private partnership work.

I am aware that many who dislike the thought of regulating the wireless industry point to the C Block as proof that regulation is bad. In particular, AT&T argues that it paid $2.68 MHz/Pop for B Block licenses rather than $0.76 Verizon paid for C Block licenses to avoid the open device condition. Bad regulation! According to AT&T, the condition reduced auction revenue by nearly $1.90 MHz/Pop.

Even if we accept that as true (and for reasons I give below, I find it hard to swallow), think about that for a minute. AT&T will pay billions of dollars to keep its networks closed. Why on earth would it do that? Unless it plans to get that revenue from somewhere else. And they do. That $2 MHz/Pop is bribe money from AT&T to the federal government to have the freedom to charge me, and you and every other subscriber $600 for an iPhone. It's a bribe to the Treasury to be able to keep competing services off their system, so it can charge dollars for ring tones instead of the pennies people pay in Europe and Asia. It's a bribe to the Treasury to be able to keep us in the digital stone age so that AT&T can remain "master of its domain" and dictate exactly who gets to speak, what services get offered, and what price we all have to pay.

In keeping with the Passover Season, I can only say to Congress "Let the American People Go!" We can start by rethinking the D block, and trying to develop rules for a public/private partnership that puts our public interest goals first and maximizing revenue out of the picture. But whether it is thinking about how to resolve the outstanding problem of D block and getting a public safety network built, opening wireless networks, or encouraging new entrants who will provide economic opportunities to ***all*** Americans regardless of gender, color or where they live, Congress and the FCC must change course. We must stop making auction revenue our highest priority while praying that somehow the next spectrum auction will be different. Because, unless Congress and the Commission have the courage to start "picking winners," we can expect to see the same results again and again and again.

BACKGROUND

I. Rules that Maximize Revenue – And Nothing Else

Many hoped this most recent auction would transform the wireless world and lift our national broadband infrastructure out of its current doldrums by creating a wireless "third pipe." Others looked for new, powerful wireless providers to create fresh competition in an increasingly concentrated wireless market. For its part, PISC hoped that the auction would create an opportunity to open wireless networks and "free the iPhone" and other such edge devices and applications so that the citizens of the United States could enjoy the unfettered freedom and sophisticated services and applications taken for granted in Europe and Asia, but unknown here. PISC also hoped that this auction – described by many as the last major spectrum auction for the foreseeable future – would provide opportunities for small and disadvantaged businesses, including those owned by women and minorities, to acquire licenses and thus share the economic advantages of wireless.

At the same time, however, the Commission came under enormous pressure to maximize the auction revenue – despite the fact that Section 309(j)(7)(A) expressly prohibits the Commission from considering auction revenues in what should be a determination of what best serves the public interest. When industry incumbents warned that rules designed to advance any of these goals might reduce the auction revenue, it produced a raft of editorials and warnings from Members that the federal budget depended on reaching the $10 billion in auction revenue projected by the Congressional Budget Office. Pressure increased further as those opposed to the government "picking winners," "dictating business models," or otherwise interfering in what enthusiasts and wireless carriers described as a vibrant ad competitive market. Competition would appear, the FCC was told, by adopting the least restrictive rules for both the auction and for the service rules afterward.

Although I wish to praise Chairman Martin and the other Commissioners for their openness throughout this process and their willingness to consider a broad range of proposals, in the end the Commission adopted only very modest means to achieve the very substantial hopes for the auction. Deuteronomy warns that bribery "blinds the eyes of the wise and twists the words of the righteous."[2]

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[2] Deut 17:19.

And so, it would seem, does spectrum auction revenue. The FCC adopted a number of measures it hoped would maximize revenue and tempt new entrants, such as adoption of anonymous bidding and creation of a large national license. But the FCC refused to adopt recommendations that might reduce revenues or would otherwise "pick winners," such as the PISC recommendations to exclude incumbents or create a "new entrant" credit.

II. PREDICTABLE RESULTS: MAXIMIZING REVENUES MEANS THE BIGGEST WIRELESS COMPANIES WIN.

The result was sadly predictable: an auction that succeeded beyond the wildest dreams of avarice in generating revenue – despite the current financial crisis depriving many potential bidders of needed funds – and succeeded in nothing else. By the metrics of auction participation and revenue, one cannot point to a better result. 214 bidders participated, as compared with the 168 in the AWS auction. MHz/Pop prices reached levels unseen since the .com bubble burst, well over double the average MHz/Pop valuation of the AWS auction. The over $19 billion bid represents the largest collection of auction revenue in FCC history, almost doubling the CBO projection. One can argue that even minority representation showed improvement, as the number of self-identified minority bidders doubled, as did the number of minority firms winning licenses. But since this dramatic growth represented an increase in minority bidders from 4 to 8, and an increase in the number of license winners from 2 to 4, this sample size is so small as to be statistically meaningless. Still, from the perspective of maximizing revenue and not picking winners, this was absolutely the best auction ever.

But while it wildly succeeded in maximizing revenue, the auction failed dismally for almost every other policy goal. There will be no third pipe broadband provider. The dominant wireless incumbents – AT&T and Verizon – captured the bulk of the spectrum, aggravating an increasingly concentrated wireless market. Indeed, we may have reached a tipping point in which the advantages enjoyed by these vertically integrated wireless giants make it virtually impossible for the remaining wireless companies to offer any serious challenge to their dominance.

Mind you, there were some bright spots outside the auction revenue. It is a positive development that Echostar (under the name Frontier Wireless) acquired a near national footprint in the E Block after being shut out of the AWS auction by the cable companies. This will certainly enhance its ability to provide new video services and compete with cable and the phone companies – but not as broadband providers. We had hoped for much more from this auction than throwing a DBS provider a lifeline.

Similarly, while the FCC took a good first step toward freeing the potential for innovation and enhancing First Amendment freedoms by adopting the open device condition on the C Block, it is far, far too early to declare "Mission Accomplished" in the effort to free the iPhone. The inclusion of the open device/"wireless *Carterfone*" condition on the C Block licenses counts as a modest success for the auction. But it would be a disaster if this modest beginning becomes an excuse to dismiss Skype's pending petition seeking to allow all Americans the freedom to attach their own devices and run the applications of their choice on wireless networks. Now, Americans can only look wistfully as European and Asian subscribers use their cell phones as televisions or credit cards, and grumble as we pay fees for ring tones an instant messages that subscribers in other countries would never tolerate. Dismissing the Skype petition because of the "success" of the C Block would transform a modest step forward into a giant step backwards.

But perhaps the single greatest casualty of the insistence on maximizing revenue is the failure of the D Block experiment. At this point, we cannot tell with certainty why the D Block failed to attract bidders. But the fact that the FCC was compelled to protect the revenue potential of the D Block with a reserve price of over $1 billion certainly did not help. It also further underscores how much the effort to maximize auction revenue at the expense of all other public policy objectives has corrupted the spectrum allocation process despite an explicit statutory command to the contrary.

III. Congress Must Recognize That This Is A Natural Result Of A "Hands Off" Policy and Not Embark on A Quest For A "Fall Guy."

Congress and the FCC now face a choice for the future of spectrum policy. The 700 MHz auction represented the last major spectrum auction for the foreseeable future. As a result of our "hands off" policy in wireless and determination to use auctions to maximize revenue rather than "pick winners" other than the incumbents, the two largest competitors appear positioned to dominate the industry. As a sign of how difficult it has become for other wireless companies to compete with AT&T and Verizon, consider the rise in the number of petitions from other wireless companies at the FCC asking the Commission to reconsider its "hands off" policy in this "wildly competitive" market. Companies that once warned that if the FCC thought the words "regulation" and "wireless" simultaneously the world might end now ask the FCC to require roaming access, access to backhaul, and other aspects where the size and vertical integration of AT&T and Verizon allow them to shut out or charge high fees to rivals. For those of us who remember the struggles of the CLECs to penetrate the ILEC dominated wireline market, it's deja vu all over again.

Mind you, I do not accuse AT&T or Verizon of any misconduct – either in the auction or in their regular business dealing in wireless. To the contrary, they are doing ***exactly*** what we would expect profit maximizing firms to do – maximizing profit. That includes spending whatever it takes to accumulate the precious supply of government monopolies known as "spectrum licenses" from which they can extract maximum value – including the value of keeping these licenses out of the hands of potential rivals.

Similarly, I cannot agree with those who would blame Chairman Martin or the FCC for "throwing" the auction to Verizon or "squeezing out" other carriers like MetroPCS. To the extent certain rules were adopted that ended up favoring incumbents, such as the large C Block band plan and the use of package bidding (which disadvantaged some bidders), the decision to include these rules arose from the desire to help new entrants without "picking winners." Indeed, PISC supported both the large C Block band plan and the use of package bidding because potential new entrants such as Echostar (which never actually bid on the C Block) and Google (which has since said that it bid up the C Block only to meet the reserve price and trigger the open device condition) stated that absent any rules designed specifically to exclude large incumbents or advantage new entrants, the presence of a large license capable of becoming a national package would entice new entrants. Given that the Commission never seriously considered PISC's recommendation of a spectrum cap or other means to favor new entrants because of its refusal to "pick winners," the only tools it had to encourage new entrants were to give potential entrants what they asked for and pray they should up with enough money to win. Sadly, hope and gentle encouragement proved no match for economic realities.

Indeed, while some additional licenses could have been created by breaking up the C Block into smaller pieces, the results at the end of the day would very likely have been the same.[3] AT&T and Verizon wanted the spectrum, and were willing to pay top dollar for it. The auction records show both companies chased the spectrum wherever they thought they could get it (contrary to its claims post auction, AT&T ***did*** bid on the C Block despite the open device condition – as did 24 other companies besides AT&T and Verizon). These two companies are the companies that will inevitably "most value" the licenses – both because their existing networks and customer base make it cheaper to deploy new systems and because they find value in keeping the spectrum away from anyone else – and are best positioned to attract needed capital to pay for them. Under orthodox auction theory, which says that "picking winners" is the worst sin government can commit, AT&T and Verizon will win ***any auction they want to win***. This is not because the rules "unfairly" favor them, but because any set of rules designed to avoid "picking winners" guarantees that their natural advantages give them a nearly unbeatable edge.

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[3] In this regard, it is worthwhile to note that a number of entities besides Verizon and AT&T won licenses. Some, like U.S. Cellular (under the name King Street Wireless, L.P.), won a substantial number of licenses. But winning these licenses depended on avoiding conflict with AT&T and Verizon. In almost anyplace where these two companies actively sought licenses, they fought until they won.

We must therefore avoid deluding ourselves into thinking that tweaking a few rules or adopting a slightly different band plan will yield a substantially different result. If we want to see positive transformative change in the wireless world, we must stop thinking that we can maximize auction revenue, avoid "picking winners," and still somehow get the winners and results we want. Congress can order Kevin Martin or any future FCC to bring in some competition and do better next time. But unless Congress signals a fundamental shift in its philosophy, and reemphasizes the public interest goals it explicitly laid out in 1993 when it passed the first FCC auction statute, this will have the same effect as Canute ordering back the tide.

IV. Blaming the C Block Condition For What Happened In The 700 MHz Auction Makes No Sense.

I am aware that those who oppose even the modest pro-innovation, pro-competition open device condition on the C Block will vociferously object to the suggestion that further regulation can be a solution. Indeed, those most opposed to regulation – a class that unsurprisingly includes the winners of the previous auction, but includes others as well – have done their best to argue that the open device condition somehow ***caused*** AT&T and Verizon to win all the licenses. Also, in yet another sign that maximizing revenue has become the highest public interest value for many, the opponents of regulation have claimed that the C Block open device condition acted to suppress auction value and "give" the C Block licenses to Verizon at the "bargain" price of approximately $4.8 billion. AT&T in particular has indicated that it did not bid on the C Block because it preferred to avoid the open device condition.

A. The Evidence From AT&T Doesn't Add Up; Other Factors Better Explain Why The C Block Sold "Cheap."

I am always suspicious when a party complains that it did not pay nearly enough for something and that it was absolutely dying to pay more for it. We should therefore view the claims by AT&T and others that the weak tea of the open device condition was such powerful poison to wireless providers that they stayed away and left the field to Google (which only sought to meet the reserve price) and Verizon. Analysis of the released auction results showed that a total of 26 bidders tried to win various C Block licenses – ***including AT&T*** – which placed bids on REAG 2 and REAG 4.[4] It is hard to treat seriously AT&T's contention that it and others fled the C Block because of the open device condition when the record shows it was simply outbid on the licenses it wanted.

To the extent C Block went too cheaply, the chief villains appear to have been the combination of the minimum reserve price as a condition of the open device condition, the new package bidding rules, and the way the FCC opted to display the data. Google consistently bid on the package of REAGs 1-8 because, by its own admission, its primary goal was to ensure that the C Block met its aggregate reserve price. This masked the active bidding on the individual REAGs, because the active individual REAGs did not register as potentially winning bids (PWBs). It therefore appeared as if there were no significant action on the C Block, although individual REAGs did show bids occurring. A number of bidders, including MetroPCS, which actively fought for REAGs 2 and 5, placed what would have been PWBs had package bidding not been in effect. But it wasn't until Round 26 the Qualcomm's bid on REAG 4 finally caused the individual REAG bids to exceed the total of Google's package bid and break the package. This created the opportunity for Verizon, which swooped in and grabbed the REAGs in a flurry of activity between Rounds 27 and 30. Again, the fact that Verizon did not act aggressively in C Block until Qualcomm's Round 26 REAG 4 bid broke Google's package and created a chance for Verizon appears to come rushing in with a "shock and awe" campaign designed to drive out the other REAG bidders should raise serious questions about the statements of AT&T and others that the open device condition accounts for the comparative difference between the high MHz/Pop valuation in B Block and A Block.

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[4] The list of bidders for C Block licenses is attached as an appendix.

Other factors likely contributed to the difference in pricing on a MHz/Pop basis as well. The B Block licenses are smallest and therefore the most targeted and with least costly build out requirements. AT&T in particular, after it lost its bids on C Block REAG 2 and REAG 4, was apparently looking to plug holes in its coverage following its purchase of the Aloha licenses. In this regard, it is noteworthy that the B block licenses (1) reached significantly higher MHz/Pop valuations than comparable A Block licenses, and (2) showed a wide variation in MHz/Pop valuation, with the valuation in the largest markets driving the extremely high valuations overall.[5] Indeed, the difference between B Block valuation and C Block valuation may be largely attributable to the difference between retail pricing and bulk pricing. B Block licenses that targeted very desirable locations went for very high prices, C Block licenses which included the B Block population centers and much other territory besides went for lower prices, rationally discounting for the increased cost of build out and the less desirable markets.

This is reflected in the different prices paid for the REAGs in C Block. The price per MHz/Pop for the REAG 4 license, the C Block license that covers the territory of greatest interest to AT&T (and for which AT&T actually bid) and which overlaps the most active B Block licenses, the MHz/Pop value was $2.36 MHz/Pop, fairly close to the average B Block MHz/Pop of $2.68. It is only when all C Block REAG licenses are averaged, including the least valuable REAGs of Alaska and the Pacific Region, does the C Block drop to the "bargain" valuation of $0.76 MHz/Pop.

B. The Claim That The C Block Condition "Forced" AT&T to Drive Competitors Out of B Block Does Not Stand Up.

But critics of the C Block open device condition do not stop there. Some have suggested, through rather tortured logic, that the C Block open device condition also accounts for the inability of second tier providers and new entrants to contest AT&T and others in the battle for the B Block and A Block licenses. Again, this theory should be viewed with considerable skepticism, as it runs counter to both common sense and the available evidence. Even without the open device condition, there could have been only one winner of each REAG. Had Verizon lost its bid for the REAGs (and there is no reason to suppose it would have stopped bidding had others challenged it), there is every reason to believe it would have continued to push for the spectrum it wanted in the other bands. Cellco, the Verizon bidding entity, fought hard in A Block and B Block until it saw the opportunity in C Block after round 26 and switched strategies. Had AT&T fought harder and won REAGs instead of B Block licenses, Verizon would most likely have taken AT&T's place as the chief winner of B Block licenses (and possibly spent less money as a result).

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[5] Of the 8 licenses that remain in the hands of the FCC (excluding D block), 6 are B block licenses. The B Block was divided into highly desirable licenses targeting heavily populated areas and licenses in lightly populated areas. The former fetched very high prices on a MHz/Pop basis, the later much lower prices or no bids at all.

V. Assuming the C Block Condition Actually Drove Away AT&T Makes The Case For Applying Open Device Rules to All Spectrum, Not Just C Block.

Nevertheless, as a final exercise in rethinking spectrum policy, let us assume that the critics of the open device condition are right. Let us take only the least sophisticated averaging of the C Block and B block valuations, ignore the fact that more than 25 bidders fought over C Block, and assume that to AT&T and other carriers the difference in value between a license with an open device condition and a license without one is the difference between the total MHz/Pop average of the B Block at $2.68 and the total MHz/Pop C Block valuation of $0.76. We will also ignore the lower valuations for A Block and C Block, so as to construct the best case against the open device condition. That means that AT&T values a closed license more than an open license by a whopping $1.92 cents MHz/Pop.

Why?

Why should AT&T place such a high value on keeping its network closed?

The answer is obvious to anyone who has paid $600 for an iPhone. AT&T extracts a great deal of monopoly value from the ability to keep its networks closed. That $1.98 MHz/Pop comes out of the pocket of every American subscriber to a closed wireless network. It comes out of the hide of every would-be innovator that wants to offer a service on a wireless platform. That $1.98 MHz/Pop is a tax on innovation, a tax on cell phone users, and a drag on our economy as a whole. It is levied by AT&T and the other carriers operating closed networks because the federal government grants them little monopolies over the public airwaves. It is levied because AT&T and every other wireless carrier knows that without an FCC license, without the little certificate of government monopoly to use the public airwaves, the wireless market is utterly incontestable. It is an oligopoly of other companies with the same cost structures and the same economic incentives to behave in exactly the same way. Just as every one of those wireless companies came up with such consumer unfriendly innovations as early termination fees and hidden charges, so too will they continue to keep their networks closed until the government that gave them a monopoly to use the public airwaves makes them open their networks.

As long as all the wireless companies hang together, as long as they simply follow their rational economic incentive to maximize profit and capture revenue from both sides of the wireless market, then nothing will ever change unless the government forces them to change. With no open wireless networks available, consumers can't vote with their feet. And if consumers can't chose an open network, it is easy to assert that they don't want it. So the argument becomes a tautology. Consumers don't chose it because no one offers it, validating the decision not to offer it because there is no evidence people want it. And in the meantime, the wireless providers can continue to charge money from subscribers to use other people's services, and charge would-be service providers to get on the wireless platform to reach their customers.

Should we be surprised that the members of the "Wireless Club" will pay $2 MHz/Pop to keep it exclusive and avoid something as mild as the C Block open device condition? Preserving these kinds of double-sided market revenues is cheap at $2 MHz/Pop.

What should surprise us is that we allow it. We should be amazed that we will so easily sell our digital future, and allow companies such as AT&T to dictate to us how we will speak, what we will invent, and how much we will pay for the privilege of giving these licensees the fruits of our innovation. We should be astounded that companies like AT&T and their supporters can make this argument with a straight face, and that policy makers on both sides of the aisle continue to find it persuasive – and even more astonished when the case for such a trade off rests on such flimsy evidence. But most of all, we should be shocked and offended that if we are going to sell ourselves, we should do it so cheaply. If we are going to trade our digital future for a mess of pottage, we should at least get a full bowl. I don't think a one time increase in value of $2 MHz/Pop is nearly enough to justify asking Americans to remain in the digital stone age, to give up the kind of services and prices subscribers enjoy in Europe and Asia, and to pay through the nose for the services we do get.

VI. Wireless Policy At The Cross Roads; Where Do We Go From Here?

So, to repeat, we have a choice before us. We can keep going as we have been going, possibly tweaking at the edges to try to entice some new competitors (although, as the experience with the C Block band plan and package bidding show, such attempts may well prove futile and may even backfire). In that case, we should resign ourselves to auction results very much like the 700 MHz auction results. We should give up any pretense of public policy goals other than maximizing a one time revenue infusion. We should forget about wireless innovation and content ourselves to take whatever the dominant carriers offer us, at whatever prices they chose to provide them. We should resign ourselves to a broadband world dominated by the largest cable and incumbent telephone companies, and a wireless world that looks much the same – with perhaps just enough other players to give us the comforting illusion of competition.

Or, we can begin a serious reexamination of our wireless policies and structure them to achieve the goals we say we want: greater opportunities for all Americans to enjoy the benefits of new wireless technologies, a renaissance in freedom of speech and communication. And for those who will say we have these now, I will ask why political organizations like NARAL need to request permission to use short codes for text messaging, and why companies such as Rbtl and SkyDeck that want to offer us new services cannot do so.[6]

A. First Steps On The Right Road: From D Block "Problem" To "Opportunity."

The D Block offers us a good start to begin rethinking how to make wireless policy genuinely in the public interest. We must not squander it by simply lowering the reserve price and trying again. Similarly, the attempt to find an answer to the D Block must not degenerate into a search for a "fall guy" on whom we can blame the failure of the D Block to attract bidders. It would be nice if we could wag a finger at Cyren Call, drop the reserve price, and call it a day. But the truth is much more complicated and disturbing. We simply do not know, at this stage, what went wrong and what we need to do to make sure that the public safety network everyone agrees we must have gets built.

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[6] Details with regard to these companies and others are included in the Skype petition and comments of Public Knowledge, *et al.*, requesting that the FCC declare text messaging and short codes subject to non-discrimination regulation. *See* Comments of Public Knowledge, *et al.*, WT Docket No. 08-7 (filed March 14, 2008).

I would suggest it is far too early to conclude that the D Block public/private partnership can't work, and that we ought to spend some time trying to think creatively on how to make it work. I stress that this thinking is best done in the context of an open FCC proceeding, where all stakeholders - including the public - can participate in a fair and transparent manner. This will guarantee that the FCC's ultimate decision will have the benefit of the most complete record and enjoy the greatest legitimacy among all concerned.

Congress should conduct its own investigation, but in a manner that complements the FCC as well as provides needed oversight. In particular, the FCC must not feel that its highest policy goal for D Block is to squeeze the last ounce of revenue from the spectrum. This problem of ensuring that a public safety network gets built, in the absence of a direct allocation from Congress, requires new thinking and creative solutions. While the FCC should not delay, and we hope that a new auction of some type (if that proves the best solution) could occur before the end of the year, Congress and the FCC should avoid rushing to any particular solution simply as a matter of convenience.

If, on examination, a public/private partnership does prove unworkable, we should not simply tell public safety they are once again on their own, split the commercial spectrum from the public safety spectrum, and sell off the commercial spectrum in exactly the same way we've auctioned every other set of spectrum licenses for the last few years. That would not only prove an inexcusable failure to provide for our safety and well being, it would be an inexcusable waste of an opportunity to begin a serious reexamination of our spectrum allocation policies and begin a return to a policy more rationally designed to achieve our public interest goals. Instead, Congress and the FCC must consider other solutions that will provide for the needs of public safety and encourage competition. For example, should the FCC divide the D Block into regions so that no one private provider needs to swallow all the responsibility and cost? Can the FCC encourage some sort of non-exclusive consortium that would provide an incentive for multiple bidders? Is it possible that local governments could assume responsibility for the spectrum, perhaps with some kind of federal funding or with the help of federal loan guarantees to local or state governments willing to undertake the risk of assuming the role that we current look to the private sector to fill? Should Congress pass a new statute which would auction D Block and channel those funds directly to public safety to build the network? I stress that PISC does not recommend any of these solutions or any other specific solution at this time. Rather, I simply propose these as examples of the kind of creative thinking Congress and the FCC can implement together if we take the time to reexamine the problem with an eye toward what will work best rather than asking what will raise the most money.

Whatever the final answer, Congress and the FCC should look at this as an opportunity to begin rethinking spectrum policy in ways that go beyond an insistence on "not picking winners" accompanied by the contradictory hope that somehow someone other than Verizon and AT&T will win. This isn't like wishing the Yankees and Red Sox would stay out of the pennant race and give the Orioles a chance. This is our national infrastructure and a critical component of our digital future. If we will depend on competitors in the wireless markets as the driver of innovation and consumer protection, then we need to make sure that a wide enough circle of competitors has access to the spectrum.

B. PISC Recommends Considering Mandatory Wholesale As A Way To Move Forward.

PISC does recommend that the FCC adopt mandatory wholesale rules for the D Block, as initially proposed by Frontline. Mandatory wholesale would provide much needed access to spectrum for would be entrepreneurs in every market. It would create possibilities for rural providers, women owned businesses, minority owned businesses, and other would-be providers at an economic disadvantage that no auction of exclusive licenses without wholesale can provide. At the same time, it would also make capacity available to existing providers squeezed out by the high cost of licenses. In addition, PISC continues to urge the FCC to impose a spectrum cap or other form of incumbent exclusion that would prevent AT&T or Verizon from winning this spectrum as well.

CONCLUSION: THE LONGER ROAD AHEAD

Further down the road, we must consider how to unleash the potential for smart radios and how to better manage our federal spectrum. For example, perhaps agencies that do not need the entire allocation of spectrum at any given time could use networks similar to those proposed for the public/private safety networks for D Block. Federal agencies could convert their spectrum holdings into a steady stream of revenue, while retaining the availability of their spectrum for future needs. This would provide agencies with better options than the existing choices of keep spectrum unused against future need, share the spectrum with an ever increasing population of unlicensed devices, or clear the spectrum for auction to the private sector.

I offer this as a concept only, and as an example of how creative thinking about spectrum management can both serve the broader public interest and still bring in federal revenues. We have many such possibilities and choices – if we think creatively. But ever since Congress authorized the FCC to use auctions in 1993, our spectrum policy has gone increasingly down one path, a path that must inevitably lead us to an industry dominated by a few spectrum giants dictating to us our every use of the public airwaves.

Section 309(j)(3)(B) instructs the FCC to use spectrum auctions to "promot[e] economic opportunity and competition and ensur[e] that new and innovative technologies are readily accessible to the American people by avoiding excessive concentration of licenses and by disseminating licenses among a wide variety of applicants, including small businesses, rural telephone companies, and businesses owned by members of minority groups and women." I think that's a goal still worth fighting for, and I hope members of Congress still share that view as well. But we can't achieve these goals unless Congress and the FCC recognize that achieving these goals may mean sacrificing some auction revenue and "picking winners" rather than hoping for better results.

Thank you. I am prepared to answer any questions at this time.

APPENDIX

ENTITIES WHICH BID ON C BLOCK LICENSES

1) Alltel Corporation
2) AST Telecom, LLC
3) AT&T Mobility Spectrum, LLC (REAGs 2 and 4)
4) Bluewater Wireless, L.P.
5) Cellco Partnership d/b/a Verizon Wireless
6) Cellular South Licenses, Inc.
7) CHEVRON USA INC.
8) Choice Phone LLC
9) Club 42 CM Limited Partnership
10) Copper Valley Wireless, Inc.
11) Cox Wireless, Inc.
12) Cricket Licensee 2007, LLC
13) Google Airwaves Inc.
14) King Street Wireless, L.P.
15) Kurian, Thomas K
16) MetroPCS 700 MHz, LLC
17) NatTel, LLC
18) PTI Pacifica, Inc.
19) Pulse Mobile LLC
20) QUALCOMM Incorporated
21) SAL Spectrum, LLC
22) SeaBytes, L.L.C.
23) Small Ventures USA, L.P.
24) Triad 700, LLC
25) Vulcan Spectrum LLC
26) Xanadoo 700 MHz DE, LLC

Mr. MARKEY. Thank you, Mr. Feld, very much. As a Chaveskoy, I am willing to work with you to put the lamb's blood over the portholes of competition and consumers so that they can be protected against the avaricious and anti-competitive, anti-public safety strategy, which unfortunately is characterizing the way in which we are addressing these issues. I thank you.

Our next witness is Coleman Bazelon, who is a principal in spectrum analysis for the Brattle Group. He has consulted and testified on behalf of clients in numerous telecommunications matters ranging from wireless license auction, spectrum management, and competition policy to patent infringement and numerous issues. We welcome you, sir. Whenever you are ready, please begin.

STATEMENT OF COLEMAN BAZELON, PH.D., THE BRATTLE GROUP

Dr. BAZELON. Thank you. It is an honor to speak here today.

In the 700 MHz auction, the Federal Communications Commission licensed a large portion of America's so-called digital dividend. These frequencies are highly desirable. Any frequencies below about 3 GHz, those most suited for mobile communications, are generally sought after because overall there is insufficient spectrum licensed for mobile communications. The 700 MHz frequencies are below 1 GHz and are considered the most desirable. They allow transmissions over great distances with less power consumption and can penetrate buildings well. Consequently, lower infrastructure costs associated with this band make it particularly suitable for firms building new networks.

Unfortunately, the outcome of the 700 MHz auction was that the Nation's two largest mobile phone providers, AT&T and Verizon, won most of the license spectrum. Now these two providers are poised to dominate the market for high-capacity, ubiquitous wireless broadband services. The irony of this outcome is that the cellular firms that dominated the duopoly marketplace that existed prior to the first FCC auctions are the same firms that after a series of mergers and acquisitions make up AT&T and Verizon today.

This unfortunate outcome was caused by ill-configured spectrum license blocks and a poorly designed auction. The central problem was one of hubris. The FCC thought it could do too much, in fact way too much, with the tools at hand. The Commission tried to promote rural build-out, create open access, encourage new entrants, increase broadband competition and, of course, provide a solution to the serious problem of deploying a nationwide interoperable public safety network.

In an attempt to accomplish all of these various goals, the 700 MHz auction was designed with an astonishing number of new, largely untried features including package bidding, high reserve prices, open access requirements, mixing of paired and unpaired spectrum and a public-private partnership. The failure of the results was predicted. Rural build-out will be hampered. Verizon, already committed to open access on its existing network, won nationwide license on the cheap. There are no new entrants of note. There will be increased concentration in the wireless broadband market and, of course, we are no closer to solving the problem of public safety interoperability. The specifics of these policy errors are documented in a paper I have submitted with this testimony.

There were many signs of inefficiency in this auction. Foremost, the patterns of prices within the auction were often nonsensical. As a former congressional Budget Office analyst, I feel compelled to point out that the auction undoubtedly could have raised even more money than it did. A year ago, as the FCC began shaping the final band plan and auction rules, I argued that large C block licenses would have an anti-competitive effect on the auction. As configured, the band is only attractive to large, nationwide bidders, and as it turned out, Google was the only non-incumbent contender for this band and they were never believed to be seriously interested in becoming a network operator. The majority of the remaining demand on the auction was channeled to the A and B blocks, unnecessarily driving the prices of those bands out of reach for many bidders. This in and itself thwarted the auction goals of promoting rural development and additional competition in the broadband wireless marketplace. As my analysis shows, had the C block been configured differently so that more substitution was possible between the A, B, and C blocks, the auction could have raised as much as an additional $5 billion from bidders that were shut out.

As a result of this poor auction outcome, it is more important than ever to flood the market with additional license spectrum. This is necessary to mitigate the negative effects of concentration and spectrum holdings that resulted from this auction. Fortunately, there exists another reservoir of spectrum below 1 GHz that is available, namely the TV white spaces. Clearly delineating the usable white space, creating overlay licenses and auctioning them would allow the significant unmet demand from the 700 MHz auction to be satisfied with the added bonus that such an auction would raise many billions of dollars in additional revenue.

As for the pending decisions about the D block, the worst thing would be to leave it unused. Freeing it for unrestricted commercial use, configuring it as smaller geographic licenses and then auctioning it would be best. This would have the benefit of adding more commercial spectrum under flexible license to the band, which would allow a portion of the significant unmet demand from Auction 73 to be met. This approach of course would require the needs of the public safety community to be met through other means. Many observers view this outcome as unlikely.

The more likely outcome appears to be that the FCC will preserve the public-private partnership with the central features that the D block spectrum could only be used for commercial services that are interruptible and will include a requirement to build out and serve the public safety community. Any such policy should recognize the economic characteristics of spectrum for interruptible services, namely that it will come with the advertising slogan “Guaranteed not to work when you need it most.”

Spectrum such as this will be most valuable to network operators that have license spectrum in the same market that will not be interrupted, which will allow them to continue to offer service during emergencies. It is uncertain whether another licensee would more effectively use this spectrum by integrating it with its commercial network or by purchasing access to it on a wholesale basis. Consequently, this outcome should not be predetermined and any wholesale-only restrictions should be abandoned.

Finally, the economics of a public-private partnership between a commercial wireless provider and public safety users is economically tenuous at best. If the D block is re-auctioned with continuing public safety requirements, there should be no reserve price. Frankly, the FCC should count its blessings if they are able to find a provider willing to take on the commitments required of a D block licensee.

Thank you.

[The prepared statement of Dr. Bazelon follows:]

Testimony of

Coleman Bazelon
Principal
The Brattle Group

before

The U.S. House of Representatives

Committee on Energy and Commerce

Subcommittee on Telecommunications and the Internet

April 15, 2008

I. INTRODUCTION

In the 700 MHz auction, the Federal Communications Commission licensed a large portion of America's so-called digital dividend. These frequencies are highly desirable. Any frequencies below about 3 GHz—those most suited for mobile communications—are generally sought after because overall insufficient spectrum is flexibly licensed for mobile communications. The 700 MHz frequencies are below 1 GHz and are considered the most desirable. They allow transmissions over greater distances with less power consumption and can penetrate buildings well. Consequently, lower infrastructure costs associated with this band make it particularly suitable for firms building new networks.

Unfortunately, the outcome of the 700 MHz auction was that the nation's two largest mobile phone providers—AT&T and Verizon—won most of the licensed spectrum. Now these two providers are poised to dominate the market for high capacity, ubiquitous wireless broadband services. The irony of this outcome is that the cellular firms that dominated the duopoly marketplace that existed prior to the first FCC auctions are the same firms that, after a series of mergers and acquisitions, make up AT&T and Verizon today.

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In an attempt to accomplish all of these various goals, the 700 MHz auction was designed with an astonishing number of new, largely untried, features, including package bidding, high reserve prices, open access requirements, mixing of paired and unpaired spectrum, and a public-private partnership. The failure of the results were predicted: rural build-out will be hampered, Verizon—already committed to open access on its existing network—won a nationwide license on the cheap, there are no new entrants of note, there is increased concentration in the wireless broadband market and, of course, we are no closer to solving the problem of public safety interoperability.

There were many signs of inefficiency in the auction. Foremost, the patterns of prices within the auction were often nonsensical. Also the auction undoubtedly could have raised even more money than it did. As the FCC began shaping the final band plan and auction rules in early 2007, I argued that large C Block licenses would have an anti-competitive effect on the auction. As configured, the band is only attractive to large nationwide bidders and, as it turned out, Google was the only non-incumbent contender for this band—and they were never believed to be seriously interested in becoming a network operator. The majority of the remaining demand in the auction was channeled to the A and B Blocks, unnecessarily driving the prices of those bands out of reach for many bidders. This in itself thwarted the auction goals of promoting rural development and additional competition in the broadband wireless marketplace. Had the C Block been configured differently so that more substitution was possible between the A, B and C

Blocks, the auction could have raised as much as an additional $5 billion from bidders that were shut out.

As a result of this poor auction outcome, it is more important than ever to flood the market with additional licensed spectrum. This is necessary to mitigate the negative effects of concentration in spectrum holdings that resulted from this auction. Fortunately, there exists another reservoir of spectrum below 1 GHz that is available—namely, the TV white spaces. Clearly delineating the usable white spaces, creating overlay licenses, and auctioning them would allow the significant unmet demand from the 700 MHz auction to be satisfied, with the added bonus that such an auction would raise many billions of dollars in additional revenue.

As for the pending decisions about the D Block, the worst thing would be to leave it unused. Freeing it for unrestricted commercial use, configuring it as smaller geographic licenses, and then auctioning it would be best. This would have the benefit of adding more commercial spectrum under flexible license to the band, which would allow a portion of the significant unmet demand from Auction 73 to be met. This approach, of course, would require that the needs of the public safety community be met through other means. Many observers view this outcome as unlikely.

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Spectrum such as this will be most valuable to network operators that have licensed spectrum in the same market that will not be interrupted, which allows them to continue to offer service during emergencies. It is uncertain whether another licensee would more effectively use this spectrum by integrating it with its commercial network or by purchasing access to it on a wholesale basis. Consequently, this outcome should not be predetermined and any wholesale-only restrictions should be abandoned.

Finally, the economics of a public-private partnership between a commercial wireless provider and public safety users is economically tenuous at best. If the D Block is re-auctioned with continuing public safety requirements, there should be no reserve price. Frankly, the FCC should count its blessings if it is able to find any provider willing to take on the commitments required of a D Block licensee.

II. HISTORY OF THE BAND

The frequencies available in the 700 MHz auction are a large part of the U.S.'s so-called digital dividend. These frequencies are finally available at the culmination of process to switch over-the-air broadcasts from an analog format to a more efficient digital format. The process, due to be completed on February 17, 2009, took a generation. In addition to providing better quality[1] television with more choices, the transition to digital television will free up 108 MHz of prime radio spectrum—about one-quarter of the total dedicated to analog television broadcasts—for other uses.

The FCC began investigating advanced television services in the 1980s. Under direction from Congress, the Commission formulated an open-ended transition plan to introduce the new television technology and end the older analog broadcasts. The basic idea was that each broadcaster would receive a second digital channel in its market and simultaneously broadcast analog and digital signals until some later date (much later date) when no one would be relying on the analog broadcasts and they could be turned off. The nature of digital broadcasts would allow them to be spaced more closely together than analog signals, creating the possibility of reallocating a portion of the television band to other uses at the conclusion of the transition.

By the mid-1990s, with the first Broadband PCS auctions, the immense value of these reclaimed frequencies became clearer.[2] Some policy makers also noted the value of the second digital channel that would be assigned to existing broadcasters. Prior to passage of the Telecommunications Act of 1996, a debate developed about the relative merits of two different approaches to the transition. On the one hand, the FCC could sell the second digital channel immediately, endowing existing broadcasters with their then-current licenses and forgo clearing a portion of the band at the conclusion of the transition. On the other hand, the FCC could modify its transition plan to hasten the end date when the frequencies would be available. Congress's first intervention in this storied band of spectrum was, in the 1996 Telecommunications Act, to mandate that broadcasters receive the second channel for digital broadcasts at no cost to them.[3]

Congress's second intervention, in the Balanced Budget Act of 1997 (BBA97), was to set a deadline for the end of analog broadcasts—and, consequently, the availability of the reclaimed frequencies—of December 31, 2006 and mandate a series of auctions of the reclaimed frequencies. The 2006 deadline, however, had a glaring loophole—it made an exception for turning off the analog broadcasts in any market where less than 85% of homes could receive the digital broadcasts. Further, to be counted as part of the receiving public, a household had to either be capable of receiving and viewing at least one over the air digital channel or, in the event a household relied on a multichannel video distributor such as cable or satellite, it must receive *all* digital broadcasts in its market from its video provider. By 1999 Congress realized that the 2006 deadline was not going to be met and that the transition was once again an open ended affair.[4]

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[1] Better quality in a technical sense. It is well beyond the scope of the current analysis to judge the quality of television programming today.

[2] Groundwork was laid in an important paper by two FCC staffers. *See*, Evan Kwerel and John Williams, "Changing Channels: Voluntary Reallocation of UHF Television Spectrum," OPP Working Paper Series #27 (November 1992).

[3] The 'no charge' requirement only applied to non-subscription video programming broadcasts. For any ancillary service for which the broadcaster earned revenues, a 5% gross revenue fee was imposed. Collections to date have been minimal.

[4] Congressional Budget Office, "Completing The Transition To Digital Television," *CBO Papers,* September 1999.

Although the early auction deadlines imposed by the BBA97 were not met, the FCC did license and auction some of the frequencies. Starting in 2002 with Auction 44[5], the FCC sold two bands comprising 18 MHz of licensed spectrum. The existing broadcasters in these bands—those broadcasting on TV channels 54, 55 and 59—were protected, so the new licensees could only use the white spaces around those protected television broadcasters until the conclusion of the digital television transition, at which time the entire licensed band would be available. Without any definite date as to when the digital television transition would end and the protected broadcasters would vacate their channels, the early auction of those television channels raised only paltry sums—a total of only $146 million (or about $0.03/MHz-Pop) for the 18 MHz of radio spectrum.

Demand for the frequencies that would be reclaimed at the end of the digital television transition grew and so did a solution to the open ended nature of the transition. In early 2006, the President signed a deficit reduction act which set February 17, 2009 as the end date of the digital television transition and mandated that the remaining 700 MHz band frequencies designated for commercial users be auctioned by 2008. So as to not disenfranchise viewers who relied on over-the-air broadcasts, that legislation also set up a program to subsidize set-top converter boxes. Estimates of the value of the remaining 700 MHz spectrum to be auctioned were over $20 billion.[6] The Congressional Budget Office gave the legislation a score of $10 billion. The revenues for the auction were estimated to be higher than this—the score represented the expected *net* effect on the budget, including a reduction in revenues for the already planned AWS auction from the increased supply of licensed commercial spectrum that would soon be available.

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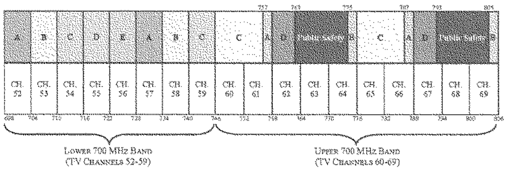
[5] Unsold licenses were subsequently sold in Auction 49 and Auction 60.

[6] Bazelon, Coleman. "Analysis of an Accelerated Digital Television Transition," Analysis Group. (May 31, 2005), p. 1. *See also*, William P. Zarakas and Dorothy Robyn, Letters to the U.S. House of Representatives Committee on Energy and Commerce and the U.S. Senate Committee on Commerce, Science and Transportation regarding the value of wireless spectrum in the 700 MHz band, May 18, 2005.

III. PROBLEMS WITH THE CURRENT ALLOCATION OF THE 700 MHZ BAND

Figure 1
The Current 700 MHz Band Allocation

Revised 700 MHz Band Plan for Commercial Services



Block	Frequencies (MHz)	Bandwidth	Pairing	Area Type	Licenses
A	698-704, 728-734	12 MHz	2 x 6 MHz	EA	176
B	704-710, 734-740	12 MHz	2 x 6 MHz	CMA	734
C	710-716, 740-746	12 MHz	2 x 6 MHz	CMA	734
D	716-722	6 MHz	unpaired	EAG	6
E	722-728	6 MHz	unpaired	EA	176
C	746-757, 776-787	22 MHz	2 x 11 MHz	REAG	12
A	757-758, 787-788	2 MHz	2 x 1 MHz	MEA	52
D	758-763, 788-793	10 MHz	2 x 5 MHz	Nationwide	1 *
B	775-776, 805-806	2 MHz	2 x 1 MHz	MEA	52

* Subject to conditions respecting a public/private partnership.

The blocks shaded above in gray (Lower 700 MHz Band C and D Blocks and Upper 700 MHz Band A and B Blocks) were auctioned prior to Auction 73.

Last reviewed/updated 9/5/2007.

A. C BLOCK IS TOO BIG

The central problem with the 700 MHz allocation is that too much of the available radio spectrum is tied up in the allocation of the large regional C Block licenses. The regional C Block licenses are large in both geographic scope—it takes only six to make up the continental U.S.—and spectrum bandwidth—the licenses are approximately twice the size of the other paired blocks allocated in the 700 MHz band. One-third of the total frequencies available were allocated in these large blocks, making them effectively unavailable to most bidders.

Smaller geographies would have more effectively met demand. Smaller licenses obviously meet the demands of bidders that have only smaller-sized demands for spectrum. However, as the AWS auction demonstrated, they can also be used as building blocks to meet the demands of bidders with larger, but uniquely defined spectrum needs, as well as bidders with regional or national spectrum needs that could also have been met by REAG licenses.[7] In other words, smaller licenses provide bidders with the flexibility to create a package of licenses that best meets their individual needs—including needs for large amounts of licensed spectrum.

This flexibility from smaller licenses is further enhanced when multiple smaller licenses are available. Multiple licenses provide alternatives for meeting spectrum demands in all areas by many different types of bidders. Bidders with large demands can aggregate many licenses to assemble a near national footprint just as AT&T did in the 700 MHz B Block. But with multiple smaller licenses, opportunities would still exist for collections of bidders with smaller demands to meet their needs.

The FCC said, "the use of REAGs may meet the needs of carriers interested in creating a large regional or nationwide service area, which may be especially important for new entrants."[8] Although it is true that the larger licenses *may* meet the needs of bidders that *may* be entrants, the larger size will *certainly* block the needs of other bidders with smaller geographic ambitions, including non-national entrants.

The argument for the larger licenses rests on the belief that aggregating smaller licenses is problematic. The AWS and 700 MHz auctions both demonstrated that this concern is overblown. The higher prices paid for larger licenses in the AWS auction likely had more to do with specifics of how that auction unfolded than the larger size of the licenses.[9] And like SpectrumCo in the AWS auction, AT&T was able to assemble a large footprint of licensed spectrum from a collection of smaller licenses.

Some suggest that the potential cost of the added flexibility provided by additional smaller licenses instead of larger REAG licenses is the possibility of added aggregation risk associated with smaller license sizes. This is the risk that a bidder who requires a larger reach of licenses is dissuaded from bidding for those licenses because of the fear that they will not be able to complete their package. However, there is no conclusive evidence of the existence of aggregation risk in FCC auctions. Moreover, the ability of one bidder in the AWS auction—SpectrumCo—to aggregate a near national footprint from relatively small BEA licenses demonstrates that aggregation risk can be successfully managed.

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[7] *See generally* Coleman Bazelon, "The Economics of License Sizes in the FCC's 700 MHz Band Auction" (submitted as an attachment to Letter from Michele C. Farquhar, Attorney for SpectrumCo, LLC, to Marlene H. Dortch, Esq., Secretary, Federal Communications Commission, WT Docket No. 06-150 (filed Jan. 8, 2007)).

[8] Federal Communications Commission, "Second Report and Order." WT Docket No. 06-150 (Rel. August 10, 2007) ("Second Report and Order"), ¶ 81.

[9] The sequential nature of how FCC auctions play out with larger, more expensive licenses reaching final pries sooner than smaller licenses means that if expectations of final license prices overshoot actual license prices, bidders for the larger licenses that reach final prices first will likely overpay. This seems to be what happened with the REAG licenses in the AWS auction. "Expect bids of $30 billion (range of $10-$50 billion); expectations hover near $15 billion." Tim VandenBerg, Leslie Aplerstein and Joe Lieber, "Issues to Watch: 109th Congress," *Washington Analysis,* May 24, 2006, at 7. AWS auction receipts were $13.7 billion.

Larger licenses do not always sell for a premium. The AWS auction exhibited both aggregation premiums and aggregation discounts.[10] In previous auctions of the Lower 700 MHz band spectrum, the larger EAGs actually sold at a discount to the much smaller CMA licenses.[11] In addition, the initial auctions of 30 MHz PCS licenses showed a significant premium for the smaller BTA licenses over the larger MTA licenses.[12] And in the 700 MHz auction, the C Block sold for much less than the A and B Blocks. Therefore, aggregation risk has generally not been determinative of pricing patterns in previous FCC auctions, and any such risk would have been mitigated if the FCC allocated an adequate number of smaller licenses in the 700 MHz band plan.

Moreover, a few commenters in the 700 MHz proceeding argued that some bidders would have large regional or national demands for spectrum in the 700 MHz band auction and, therefore, larger sized licenses would be needed to meet this demand.[13] This conclusion does not follow from its premise. Verizon, Cingular, AT&T Wireless (prior to its acquisition by Cingular), Sprint and Nextel (prior to their combination), and T-Mobile all created national mobile phone networks from licenses no larger than an MTA. Consequently, experience indicates that smaller sized licenses are enough to meet demand for small, medium and large spectrum needs.[14]

A further benefit of smaller license geographies is that they reduce the need for strict performance requirements. One way a firm will find itself holding spectrum that it does not intend to use is if it is forced to purchase licenses with large geographic coverage that encompasses areas the firm is not interested in. The smaller license sizes allow firms to purchase spectrum only where they need it and, consequently, reduces the likelihood of a firm finding itself with licensed spectrum in areas it does not intend to build out.

Smaller bandwidths would have more effectively met demand. The FCC divided the Upper 700 MHz band into one 22 MHz block (the C Block) and one 10 MHz block (the D Block). This division of the band severely limits the opportunities for this band to be efficiently assigned during the auction. Splitting the C Block into two blocks (as would have happened in Auction 76 if the block did not meet its high reserve price in Auction 73) would have created added flexibility that would have enhanced the chances of a successful auction. In the AWS auction, the FCC recognized that some bidders may want large amounts of spectrum in a given geographic market, but also acknowledged that larger license blocks eliminate the possibility of the band being assigned to more bidders with smaller spectrum requirements. Likewise, in the 700 MHz band auction, the extra license created by dividing the C Block into two licenses would have opened the possibility for more bidders to win licenses.

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[10] The 20 MHz B Block EAs sold at a discount to the 10 MHz of the C Block EAs on a $/MHz-pop basis. The 20 MHz F Block REAGs sold at a premium to the 20 MHz B Block EAs. The 10 MHz D Block and E Block REAGs sold at a premium to the 10 MHz C Block EAs, but only at a fraction of the premium of the F Block over the B Block. The B Block sold for an average price of $0.43/MHz-pop. The C Block sold for an average price of $0.51/MHz-pop. The D Block sold for an average price of $0.58/MHz-pop. The E Block sold for an average price of $0.60/MHz-pop. The F Block sold for an average price of $0.73/MHz-pop.

[11] Combining the results of Auction 44 and Auction 49, the CMAs sold for an average price of $0.033/MHzpop and the EAGs sold for an average price of $0.026/MHz-pop.

[12] Final bids in Auction 4 of the 30 MHz A & B Block MTA licenses averaged $0.51/MHz-pop. Final bids in Auction 5 of the 30 MHz C Block BTA licenses averaged $1.35/MHz-pop. Even after adjusting the C Block results for the favorable financing terms afforded bidders, the prices bid are still estimated to be $0.80/MHz-pop to $1.10/MHz-pop—57% to 116% higher than the bids in the A & B Block auction. Congressional Budget Office, "Where Do We Go From Here? The FCC Auctions and the Future of Radio Spectrum Management," *A CBO Study*, April 1997, p. 19.

[13] *See, e.g.,* Joint Comments of DIRECTV, Inc. and EchoStar Satellite L.L.C., at 3-7 (filed Sept. 29, 2006); Comments of Verizon Wireless, at 4-5 (filed Sept. 29, 2006); Comments of Motorola, Inc., at 6-8 (filed Sept. 29, 2006); Comments of Qualcomm Incorporated, at 16-17 (filed Sept. 29, 2006).

[14] Furthermore, the Commission's decision to implement package bidding in the C Block completely negated the need to offer *any* licenses as large as an REAG.

More licenses with less bandwidth each would have also reduced aggregation risk in the auction. The risk of a failed aggregation is lower if there is more flexibility for a bidder to achieve its desired aggregation. The added flexibility created by more licenses would bolster bidders' perceptions of the likely success of attempting aggregations. For example, a bidder that desires a nationwide footprint, but does not need large bandwidth in all markets, will have a higher probability of a successful aggregation—and consequently will be more likely to participate in the auction—if it is creating its aggregation from licenses in multiple smaller bands of spectrum.

B. OPEN ACCESS

For the first time, the FCC imposed open access requirements on a band of spectrum.

> Although we generally prefer to rely on marketplace forces as the most efficient mechanism for fostering competition, we conclude that the 700 MHz spectrum provides an important opportunity to apply requirements for open platforms for devices and applications for the benefit of consumers, without unduly burdening existing services and markets.[15]

As a general matter, proposals to compel a network owner to provide access to its network should be met with skepticism. The central concern is that in prying open a network, regulation reduces the returns to the owner from investing in that network and, consequently, less network investment is undertaken. This negative effect was seen in the wireline network under UNE-P regulations.[16] Sometimes regulation may be necessary, but given the likely costs, clearly identified benefits should be present. To justify regulatory intervention, there should be specific identified market failures that cause adverse outcomes that need to be corrected.

Evidence of anti-competitive restrictions by wireless network operators is sparse. The commercial mobile phone networks intensively share the spectrum they use with more than 250 million wireless subscribers in the U.S. Evidence of innovative new products is abundant. General Motor's OnStar system and Amazon's Kindle are just two well known examples of new devices and services implemented over the existing mobile phone network in cooperation with network owners.

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[15] Second Report and Order, ¶ 195.

[16] Thomas Hazlett and Coleman Bazelon, "Regulated Unbundling of Telecommunications Networks: A Stepping Stone to Facilities-Based Competition?," paper presented at the Telecommunications Policy Research Conference (September 2005). *Also see*, Federal Communications Commission, "Declaration of Thomas W. Hazlett, Ph.D., Arthur M. Havenner, Ph.D., and Coleman Bazelon, Ph.D." WC Docket No. 03-157 (September 2, 2003).

C. MIXING OF HIGH POWER AND LOW POWER USES

The Lower 700 MHz band mixes low-power and high-power transmissions. The previously auctioned Lower 700 MHz D block and the recently auctioned Lower 700 MHz E block are both unpaired bands. As such, they are particularly suited for one-way broadcast transmissions. The FCC allows higher power levels because broadcasting services work more efficiently at higher power levels than most two-way cell-based communications systems. Placing a higher power service adjacent to a lower-power service can render a portion of the bandwidth dedicated to the lower-power service unusable. In the case of the Lower 700 MHz A Block, the E Block reduced the perceived amount of usable A Block spectrum by as much as one-third.

D. CHANNEL 51 PROBLEMS

Similar to the problem of the high-powered E Block broadcasts, television channel 51 broadcasts are also adjacent to the Lower 700 MHz A Block and can cause interference to the A Block licensees, making the effected licenses less valuable. These continuing television broadcasts are in 41 markets, including such important markets as Chicago. The effect of those broadcasts is to render the A Block spectrum around the broadcast tower largely unusable for two-way mobile communications. The total amount of population contained in a 20 mile radius around all of the channel 51 transmitters is approximately 7.3 million people or 2.6% of the total band.[17] Even if the value of the entire license that contains a channel 51 transmitter was rendered unusable (a gross exaggeration given that these licenses collectively received $2.3 billion dollars in bids), at most about 21% of the U.S. population would be affected.

E. D BLOCK WILL NOT SOLVE PUBLIC SAFETY'S PROBLEMS

The Upper 700 MHz D Block was set aside for a public-private partnership where the winner of the D Block would build a national network that would be available to public safety users. The goal was laudable: public safety users need both access to broadband networks and the ability to communicate across institutional boundaries. Unfortunately, the FCC did not have the tools (including appropriations) needed to properly address public safety interoperability. Furthermore, they left too much uncertainty for the potential D Block licensee by not having clearer rules for its relationship with the pubic safety community. Consequently, the Commission's insufficient attempt to solve public safety's problems through the licensing of the D Block failed.

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[17] The spectrum affected by channel 51 interference issues is fairly representative of the value of spectrum nationwide.

The intent of the D Block rules was to strike a deal with a private company to enter a partnership with public safety users. The attraction for the potential D Block licensee was 1) access to an additional 12 MHz of frequencies allocated to public safety for broadband uses, including the ability to use these frequencies to sell interruptible services to commercial users, 2) access to the public safety community to sell interoperable broadband services, and 3) a likely lower price at auction, given the requirements associated with the band. In return, the D Block licensee would be required to build a national network relatively quickly and sell interoperable services to public safety users that could preempt the commercial services during emergencies. The D Block licensee would also be required to sell its commercial services on a wholesale basis.

The problem with this approach is that the inducement of less expensive spectrum is not sufficient to overcome the costs associated with obligations to the public safety community. These costs were exacerbated by the uncertainty related to just what the license requirements would entail in practice. Ultimately, the most likely D Block bidder, Frontline, did not participate it the auction.[18] The initial proposals for a public-private partnership solicited 30 MHz of spectrum—three times the 10 MHz available in the D Block—for free in exchange for providing an interoperable network to public safety users.[19] That may have been overly generous to the licensee, but the current package of obligations and inducements is apparently not sufficient to convince private capital to invest in the D Block scheme.

For the D Block to be successful it would have to be the case that the public-private partnership would be commercially viable except for the reduced price paid for spectrum. (Otherwise, a similar service could be provided with unrestricted commercial spectrum.) Spectrum license leases for non-interruptible service may value access to the spectrum in the range of 10% to 20% of service revenues generated from using the licensed spectrum. Consequently, for the D Block policy adopted by the FCC to be sensible, the public-private partnership with the current set of obligations would have to be *almost* viable using commercially licensed spectrum. The lack of any sincere bidding indicates that it was not even a close call.

F. BUILD-OUT REQUIREMENTS TOO STRICT

The build-out requirements for the licenses recently auctioned in the 700 MHz band were some of the strictest ever imposed by the FCC.[20] The Lower 700 MHz band blocks require 70% of the geographic area of the license be built out or the FCC will take back a portion of the unused areas after 8 to 10 years. The Upper 700 MHz C Block requirement is that 75% of the population be built out, again subject to loss of the unused territories after 8 to 10 years. The D Block requirements are even harsher—99.3% of population in ten years.[21] These contrast to the build out requirements of the previously auctioned portions of the Lower 700 MHz Band and the AWS licenses, which carry a much laxer "substantial service" requirement.

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[18] Jeffrey Silva. "Frontline's demise leaves D Block, public safety plans in limbo." RCRWireless News, (January 10, 2008).

[19] Jeffrey H. Birnbaum. "Public Safety and Profit: On the Same Wavelength?" The Washington Post, (January 9, 2007).

[20] "In order to better promote access to spectrum and the provision of service, especially in rural areas, we replace the current "substantial service" requirements for the 700 MHz Band licenses that have not been auctioned with significantly more stringent performance requirements." Second Report and Order, ¶ 153.

[21] Second Report and Order, ¶ 437.

The geographic build out requirements of the Lower 700 MHz Band are draconian. Assuming a licensee builds the most densely populated areas first, a 70% geographic coverage requirement translates to a 96% population coverage for EAs and a 94% population coverage for CMAs. Conversely, a 75% population requirement can be met by building an average of only 23% of the geography of the licensed spectrum for EAs and 34% for CMAs.

The stated intent of these strict build out requirements was to promote rural broadband development. Unfortunately, these rules may slow that development. Due to the effect of discounting in spectrum license valuations, the stricter rules are unlikely to affect significantly bidders' valuations, largely negating the punitive effect of the requirements. Bidders who purchased licenses—especially the smaller licenses in the Lower 700 MHz band—will clearly build out the most populated areas that represent the lion's share of value of the licenses. The areas a licensee would not otherwise build are obviously the least valuable. If they do not build those areas themselves, the licensees will have an incentive to sell the remaining portions of their licenses, even at a loss.

The hammer of the pending relinquishment of unused areas can make those areas more difficult to disaggregate or partition and sell to parties interested in building in the more rural areas. Of course, the initial incentives to sell off unwanted portions of a license are strong. However, they are not much stronger than without the threat of loss of the territories. As time passes, a purchaser of rural frequencies has an increasingly short time to deploy a system. This further erodes the value of those unused frequencies, making reassignment of them more difficult. Absent reassignment of otherwise unwanted frequencies, a licensee may be forced to build an area that does not fit in its business model—a situation that cannot lead to efficient results.

IV. PROBLEMS WITH THE 700 MHZ AUCTION RULES

A. PACKAGE BIDDING DID FAR MORE HARM THAN GOOD

The FCC introduced package bidding for the first time in a major spectrum license auction. The purpose was straightforward—to allow a national entrant to purchase the entire C Block. The outcome was to allow a national incumbent to purchase the C Block at a discount.

As discussed above, aggregation risk is manageable in a well designed auction. All that is needed to minimize the risk of a failed aggregation is multiple bands for offer. An alternative approach to managing aggregation risk is to offer package bidding. A bidder whose needs require an aggregation of licenses faces the risk in an auction of purchasing only some of its required licenses, but not being able to afford the rest. This situation may be worse than winning no licenses at all. For example, suppose a firm had a business model to offer ubiquitous service along the north east coast. Its auction strategy would be to purchase the licenses that would allow it to offer that service. This may include BEA licenses for Washington, DC, Philadelphia, New York, and Boston. The problem occurs if the bidder holds the Provisionally Winning Bid (PWB) on these licenses, but is bid off of one of them, say the New York license, and to bid back would require it to bid beyond its budget. Now the bidder would prefer to abandon its business plan and purchase no licenses. However, as the PWB on some licenses the bidder will now risk incurring a withdrawal penalty if it withdraws its bids and exits the auction. This risk of a financial penalty if it fails to successfully aggregate the licenses it needs may cause the bidder to bid less aggressively or not at all.

One solution to this potential problem is to allow bidders to place a package bid for the collection of licenses that it desires. In this case, the bidder will either win all of the licenses it bids on or none of them. This avoids the exposure problem and allows bidders to bid more aggressively. It must be emphasized, however, that if package bidding is used, it is nonsensical to use large REAG licenses containing large amounts of spectrum. The FCC used two redundant tools to advantage bidders with larger demands.

Similar to the arguments for larger license blocks, as discussed above, the arguments for package bidding are likely overstated because concern about aggregation risk is likely overblown. Managing aggregation risk within an auction is feasible. The cost of a failed aggregation is likely much higher for an entrant than an incumbent. Nevertheless, SpectrumCo assembled 91% of the AWS B Block licenses and AT&T was able to win 62% of the Lower 700 MHz B Block licenses. Further, the true but small benefits of avoiding aggregation risk must be balanced against the costs to the auction of package bidding.

The costs from the package bidding rules were high. As it turns out, Google placed a series of package bids on the C Block until the block met its reserve price and the open access rules were assured.[22] Verizon won the C Block by outbidding Google by only $30 million at a time when the bid increment for a bid on a package of licenses would have required an increase of $464 million. It accomplished this through deft use of the auction rules.

Each round, the collection of bids on individual licenses in the C Block is compared to the last package bid and whichever is greater is the PWB for either the individual licenses separately or all of the licenses collectively. If a bid is placed on an individual license, but the package wins the round, that bid remains active in the sense that it is considered in subsequent rounds when comparing the sum of individual license bids to the package bid. Two caveats apply: although the bid can lead to a PWB for the license it does not tie up any of the bidder's eligibility and a bidder can remove the bid from consideration. Verizon won the C Block through a collection of individual bids placed in over 4 rounds (rounds 27 through 30). It did this using only 159,886,000 bidding units, 121,230,000 less than the 281,116,000 required to place a simultaneous bid on the same set of C Block licenses. An additional 121,230,000 bidding units would have tied up an additional $121,230,000 of Verizon's money in upfront payments.

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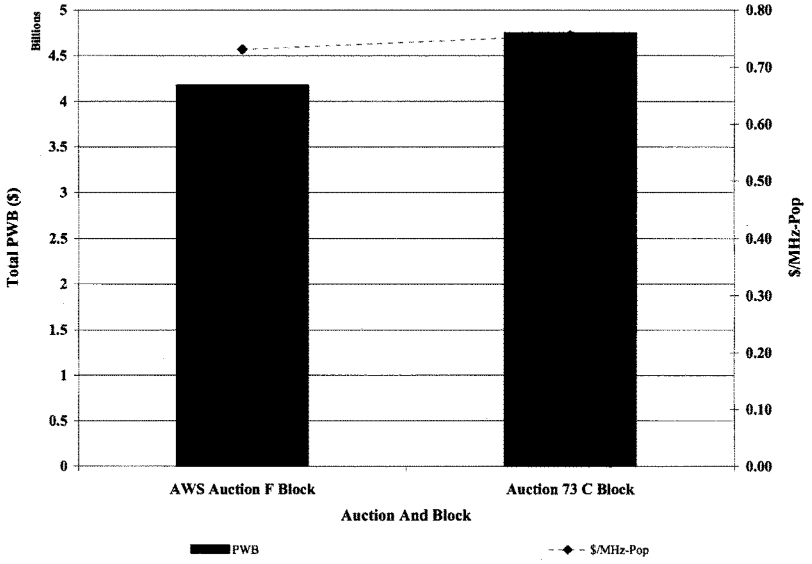
[22] It is interesting to note that the bid Google placed to push the block over the reserve price pushed the total bids for the band more than $78 million dollars beyond the reserve price. This is seems odd behavior for a serious bidder because it seemed to overpay. Google was not being seriously challenged for the C Block after about round 8 when bids on individual regions dropped off significantly. (There were only 3 scattered bids between rounds 8 and 27.) It therefore had a lot of flexibility in the timing of the bids it placed and significant control over the bid increments for the national package. In fact, Google could have pushed the C Block over the reserve in Round 14, but saved itself more than $151 million by waiting until round 17, but could have saved additional money by continuing to wait. Therefore, it was within Google's control to push the C Block over the reserve by only a few dollars instead of the more than $78 million it wasted in its last bid.

Verizon's move to bidding in the C Block came relatively late in the auction. This meant that few other bidders would be able to have enough free eligibility to place any bids on the large regional licenses in the continental U.S. The smallest of the big six regional licenses is the Mississippi Valley license that required 28.7 million bidding units to place a bid. The next largest is the Central license requiring 40.0 million bidding units, followed by three licenses requiring about 50 million bidding units each and one even larger, the Great Lakes license. A bidder that might be interested in bidding on a C Block regional license later in the auction will have the challenge of freeing up enough eligibility to place a bid on one of those licenses. Each bidder may have some buffer of eligibility, up to 20% in the early part of the auction, and will likely be bid off of some licenses in each round, but it may take more than one round to bid on the largest licenses. Therefore, a bidder could use the smallest license—Mississippi Valley—as a stepping stone to bidding on the other C Block regional licenses. Verizon intentionally bid up the value of the Mississippi Valley license—a Mississippi Two-Step, if you will—by raising its own bid to extremely high levels—$1.6 billion or $2.36/MHz-pop—effectively blocking other bidders ability to enter the fray in the C Block by starting its bidding on that license. This was a sensible strategy so long as Verizon expected to win all or most of the large regional licenses because what it paid in a high bid in the Mississippi Valley was more than offset by the very low prices it paid for the other regional licenses. Overall, Verizon paid prices comparable to the AWS auction for the majority of its 700 MHz band licenses. See Figure 2.

Figure 2

AWS F Block Vs. Auction 73 C Block



B. BLIND BIDDING EXACERBATED OTHER PROBLEMS

Only limited information was available to bidders during the auction. Key to what was not available was the identities of other bidders. Information during an auction can serve two purposes. On the one hand, it can help the price discovery process and aid in finding an efficient allocation of licenses, especially if an auction is sufficiently competitive. On the other hand, it can allow bidders to tacitly coordinate bids leading to a reduction in auction revenues and a possible reduction in efficiency of the auction. This latter problem is exacerbated when competition in an auction is low. The FCC chose to limit information to squelch potential collusion.

This policy had many negative effects on the auction. It made it much more difficult for bidders interested in individual regional licenses in the C Block to coordinate their efforts to overcome the package PWB. It also made it much more difficult for bidders to assess how risky any strategy would be or how secure it was that its PWB would stick. Further, losing a desired market to another bidder can have different implications based on the other bidder's status as a national incumbent versus regional entrant or that bidder's likely technology choices. All of these benefits of information during the auction were lost through blind bidding.

Blind bidding had other, perhaps unintended, consequences. After Verizon won the C Block in round 30, it had a deficit in free eligibility of negative 115 million units from its considered bids on regional licenses from previous rounds suddenly becoming PWBs. A very interesting side effect of Verizon's eligibility deficit was that it could not bid back on other licenses when it was bid off of them. Recognizing that this was likely the case, but not knowing which A and B Block licenses the new C Block PWB was winning, bidders would test the waters by bidding on a license and seeing if they were bid back. In an open auction, everyone would have known which licenses could be bid on without the existing PWB (Verizon) bidding back. Verizon's eligibility deficit—itself an undesirable consequence of the package bidding rules—ended the auction at negative 85 million. It would have been much smaller in an open auction. This would have likely been more efficient.

V. NET EFFECT OF AUCTION PROBLEMS

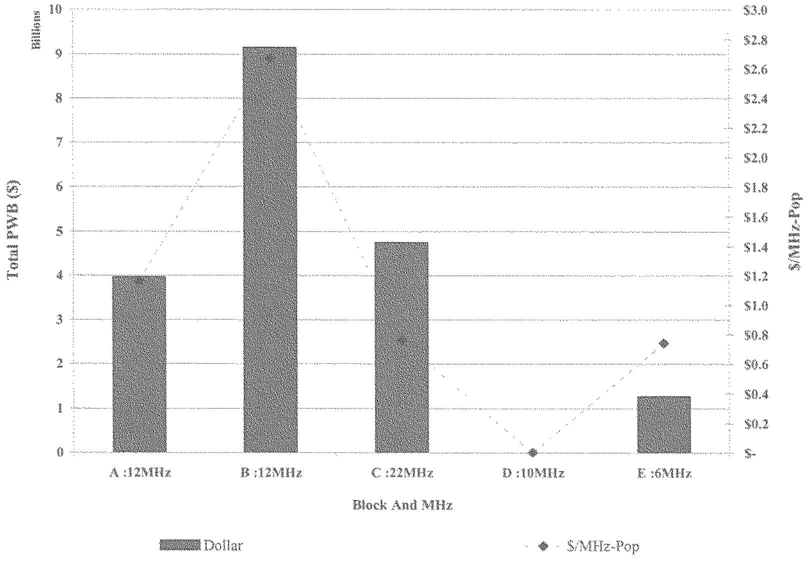
A. SIGNS OF INEFFICIENCY

There were many signs of inefficiency in the 700 MHz auction.

A, B and C Block price differences. The widely disparate prices for the three paired commercial bands—the A, B & C Blocks—seem much greater than would be expected given the differences in service rules for the three blocks. See Figure 3. The B Block was the least constrained of the three and can serve as a benchmark as the least encumbered spectrum.

Figure 3

Total PWB And $/MHz-Pop Price By Block



- As noted above, somewhere between 3% and 21% (10% seems a reasonable placeholder) of the A Block's value was unusable because of interference from Channel 51 broadcasts. Furthermore, uncertainty about the placement of the high-powered E Block transmitters potentially reduced the usable portion of the A Block by one-third.[23] These interference concerns may have led to as much as a 40% discount in value for the A Block compared to the B Block.[24] The A block sold for a 57% discount to the B Block.

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[23] Like the Channel 51 interference, the problems from the high-powered E Block spectrum would be localized around the transmitter sites. Unlike the Channel 51 problem, it is not yet known where those transmitters will be located. Consequently, bidders had to consider the possibility of a high powered E Block transmitter anywhere.

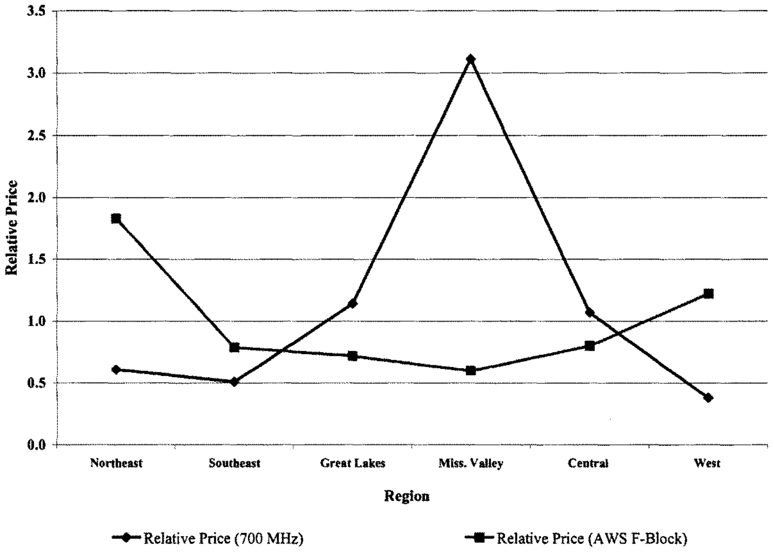
[24] Of course, many other factors go into translating the interference issues into valuation differences and the actual number could be higher or lower than 40%. For example, the experience from the AWS auction would indicate that the larger A Block BEA licenses should have sold for more than the smaller B Block CMA licenses. Overall, the likelihood that the net effect on value is much less than 40% is greater than it being much more than 40%. Consequently, 40% is a conservative (*i.e.*, too high) estimate.

The impairment in value of the C Block compared to the B Block that should have remained in a better designed auction would be the open access requirements imposed on the C Block. It is difficult to say how costly this constraint is to network operators. Verizon seemed to take on open access duties voluntarily on their entire network so they must not consider the requirements too costly. As it turns out the price discount for the C Block was 48% in total dollars and 72% on a per MHz-Pop basis. It is very unlikely the burden of the open access requirements account for anywhere near all of this price difference.

▪ The price pattern of the C Block REAG license prices was nonsensical. As discussed above in conjunction with the negative effects of package bidding, the relative prices of the REAG licenses were not rational. Compared to AWS F Block, the relative prices of the licenses were almost inverted. See Figure 4.

Figure 4

Relative Price Comparison Of C Block Regions
Between AWS Auction And Auction 73



▪ Including the D Block in the 700 MHz auction presented opportunities for parking eligibility. The one D Block bid by Qualcomm at the minimum opening bid amount was well below the reserve price for that band. So long as a bid for the D Block remained below the reserve price for the band, a bidder was in no danger of actually winning the license. In the first phase of the auction, when a bidder only has to be active on 80% of its eligibility, a bid on the D Block tied up 128,210,000 bidding units, but the 20% buffer allowed the bidder to keep another 32,052,500 bidding units available without having to actively bid on them. The cost of this strategy would be tying up the upfront payments of $160,262,500 required for these bidding units. The amount of free eligibility maintained in phase two of the auction when the buffer was reduced to 5% was 6,747,880. Even 6.7 million bidding units is a significant amount of eligibility, enough to bid on any market except New York or Los Angeles.

B. SUMMARY OF REVENUE EFFECTS

It is impossible to know exactly what would be the outcome of an auction under different rules of a 700 MHz band that had been configured differently. Nevertheless, it is clear that the 700 MHz auction left a substantial amount of demand for spectrum unmet and likely also left a large amount of money on the table. The analysis below provides an indication of the value of demand that could have been met if the 700 MHz band had been configured differently and the auction rules were altered. There is no guarantee that the reported amounts of additional money would have been realized, but it seem likely that a better working auction would have raised additional billions.

Reconfiguring the C Block. The A and B Blocks had significant amounts of unmet demand that could have been met by a reconfigured C Block. The total exposure of all bids on the A and B Blocks peaked at over $18 billion in round 26—representing real money put on the table for those blocks—more than $5 billion more than those blocks ultimately sold for. Just four bidders—Alltel, Leap, MetroPCS, and King Street Wireless—showed through bids placed a willingness to spend more than $3 billion, but won less than $1 billion in licenses. See Table 1. In fact, virtually all of the licenses in the A and B Blocks had losing bidders that were willing to pay billions of dollars, but did not have their demand met.

Table 1
Maxium Exposure For Alltel, Leap, MetroPCS, and King Street Wireless
Auction 73

Bidder	Maximum Exposure
Alltel Corporation	$927,725,900
Cricket Licensee 2007, LLC	$400,624,000
MetroPCS 700 MHz, LLC	$674,394,000
King Street Wireless, L.P.	$998,530,000
Sub Total	*$3,001,273,900*
PWB	
MetroPCS 700 MHz, LLC	$313,267,000
King Street Wireless, L.P.	$400,638,000
Net Total	$2,287,368,900

Notes:
Maximum exposure is calculated as the sum of PWB from the previous round plus all bids placed in the current round across all bands for that particular bidder.

The amount of unmet demand in the A and B Blocks can be measured by examining the bids of the last bidder(s) to drop out of bidding on each license in those blocks. The analysis starts by calculating the bid of the first marginal bidder for each license. For example, AT&T won the New Orleans market in the B Block for $28 million in Round 21 when Alltel dropped out of the contest for that license. Consequently, Alltel showed a demonstrated demand of $25 million when it placed its last bid for that amount in Round 20. As shown in Table 2 below, the sum of these first marginal bidders totaled almost $12 billion for the A and B Blocks.

To calculate unfulfilled demand it is necessary to check that the first marginal bidder did not have its demand met by purchasing an alternative license. To do this it was necessary to create a pairing of the A Block BEA licenses with the smaller B Block CMA licenses by associating the largest CMA that falls within a BEA with that B Block license.[25] If the first marginal bidder for the A Bock license was the PWB for the associated B Block license, then that bidder had its demand met elsewhere and the second marginal bidder would be used for the calculation of unmet demand. Similarly, B Block CMAs are associated with A Block EAs[26] and a check on the first marginal bidder was performed. When this more careful calculation is done, the total unmet demand in the A and B Blocks totals $9.3 billion.

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[25] To build a mapping of CMAs to EAs: If at least 50.1% of a CMA's population is located within an EA, that CMA is associated with that EA. If this population criterion is not met, the EA in which the CMA population is most concentrated is chosen.

A plausible reconfiguration of the C Block would break it into one 10 MHz block that, had it been configured as BEAs, would have matched up with the A Block (given its associated E Block interference issues) and a 12 MHz license that could have been configured as CMAs and would have matched up with the B Block. Under this alternative scenario, an additional $9.3 billion in demonstrated unmet demand would have been met at the cost of foregoing the $4.7 billion received for the C Block. Had the auction captured this additional demand, the net effect on revenue from meeting this unmet demand would have been an additional $4.6 billion.[27]

Table 2
PWB, Marginal Bid Value And Unfulfilled Demand In A & B Blocks In Auction 73

	Block		
	A	*B*	*Total*
PWB	$3,961,174,000	$9,143,993,000	$13,105,167,000
First Marginal Bidder	$3,566,993,000	$8,384,935,000	$11,951,928,000
Unfulfilled Demand	$3,520,941,000	$5,825,500,000	$9,346,441,000

Notes:
If the first marginal bidder in the A block is the PWB in the B block the second marginal bidder is used. The same exercise done for the B block to calculate its total unfulfilled demand.

Scrapping the E Block. If as much as 35% of the value difference between the A Block and the B Block is accounted for from the potential interference of the E Block, then the existence of the E Block is responsible for a reduction of about $3.2 billion in the value of the A Block when compared to the B Block. The E Block raised less than $1.3 billion. Consequently, almost $2 billion in additional revenue may have been raised if the E Block was left fallow. Of course, pairing it with the A Block for an asymmetrically paired band or selling it restricted to non-interfering lower powered uses could have raised additional funds beyond the $2 billion.

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[26] To build a mapping of EAs to CMAs: Distribute the EA population over the CMAs within its geographic territory and associate the EA to the CMA which has the highest percentage of EA population.

[27] One sufficient requirement for a well working auction to capture the revenue from this demand would be if Verizon valued the A and B Blocks at least as much as the marginal bidders. It seems highly likely that Verizon would value a nationwide footprint of 22 MHz of spectrum at a minimum of $9.3 billion. If Verizon would have valued the reconfigured C Block at more than $13.1 billion (the PWBs for the A and B Blocks), then additional revenues would have been even higher. (This sufficient analysis is complicated by the fact that Verizon was the marginal bidder on many licenses.)

VI. THE CURRENT PROBLEM AND WHAT TO DO ABOUT IT

Given the outcome of Auction 73, two policy recommendations emerge for next steps in spectrum policy: flood the market with more licensed spectrum and get the D Block into private hands.

License the white spaces. Radio spectrum is an unnecessarily scarce resource. The high auction values seen for the 700 MHz band are a result of the limited amount of flexibly licensed frequency available to commercial users. The superior position that AT&T and Verizon now have in owning licensed spectrum—especially the most valuable frequencies below 1 GHz—can be mitigated by flooding the market with additional licensed spectrum. Fortunately, there exists another reservoir of spectrum with similar physical characteristics available—namely, the TV white spaces. Clearly delineating the usable white spaces, creating overlay licenses and auctioning them would allow the significant unmet demand from the 700 MHz auction to be satisfied, with the added bonus that such an auction would raise many billions of dollars in additional revenue.[28]

D Block. The worst thing to do with the D Block is leave it unused. Consequently, any action that will assign license(s) to the D Block is better than nothing. Freeing it for unrestricted commercial use, configuring it in smaller geographic licenses—CMAs or EAs—and auctioning it would be best.[29] This would have the benefit of adding more commercial spectrum under license to the band, allowing significant unmet demand from Auction 73 to be met. This approach, of course, would require that the needs of the public safety community were met through other means. Significant appropriations for a nationwide interoperable public safety wireless communications system would be required. Continuing to allow, but not require, a public-private partnership where the public safety community could barter access to its broadband spectrum for access to a commercial network—with the requirement of priority in service for public safety users during emergencies—would be sensible. This policy course, however, would require coordinated action by the FCC and Congress. It is widely viewed as unlikely.

The FCC seems more likely to preserve the public-private partnership with the central features that the D Block spectrum (and the public safety broadband allocation) could only be used for commercial services that are interruptible and some requirement to build-out and serve the public safety community. Any such policy should recognize the economic characteristics of spectrum for interruptible services and the likely implication of those characteristics on the policy.

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[28] Federal Communications Commission, "Comments of Charles L. Jackson and Dorothy Robyn." ET Docket No. 04-816, (January 31, 2007).

[29] The D Block is only 10 MHz, but if used in conjunction with the adjacent 2 MHz of the Upper 700 MHz A Block a combined A & D Block would provide a standard 12 MHz license. This possibility of an aggregation of the A and D block make this portion of the radio spectrum fully usable with currently anticipated technologies without access to the public safety bands.

Use of commercial wireless communications services during emergencies is expected by all mobile phone subscribers. The ability of citizens to communicate in times of duress enhances public safety. Further, the 'in case of emergency' aspect of mobile phone service is an important part of its value to subscribers. A carrier that relied exclusively on spectrum with interruptible services would be unable to provide any service in times of crisis. Imagine the advertising slogan: "Guaranteed NOT to work when you need it most."

Use of spectrum for interruptible services in conjunction with other spectrum licensed for non-interruptible services in the same market poses a different value proposition. In this case, only a portion of the provider's total capacity for commercial mobile communications is lost during an emergency. In non-emergency times, the spectrum for interruptible services can act as useful additional capacity. The logic of the economic value of spectrum for interruptible services leads to one inevitable conclusion: it will be most valuable to the largest incumbent carriers, especially the 700 MHz carriers, namely AT&T and Verizon. Although they apparently show little interest in supporting this policy, the fact remains that either of those two carriers could make the most use of the D Block spectrum. Consequently, any wholesale-only restrictions should be abandoned. It is not obvious which of two economic models is most sensible—one carrier using the band for its own uses or a third party deploying a network to resell to multiple other carriers—and unnecessary to pick one now.

Finally, as discussed above, the economics of a public-private partnership between a commercial wireless provider and public safety users is economically tenuous at best. Consequently, if the D Block is reauctioned with continuing public safety requirements, there should be no reserve price. Frankly, the FCC should count its blessings if it can find any provider to take on the commitments required of a D Block licensee.

Mr. MARKEY. Thank you, Dr. Bazelon. Any relation to Judge Bazelon?

Dr. BAZELON. Great-uncle.

Mr. MARKEY. A really great uncle.

Dr. BAZELON. Thank you.

Mr. MARKEY. Now all time for opening statements has been completed so we will turn to questions from the subcommittee members.

Mr. Zipperstein, you state in your testimony that the D block concept failed because its economics are fundamentally flawed, and that is that the cost of building a network to 99.3 percent of the country exceeds the value of the spectrum. Mr. Duncan suggests that the interoperability can be achieved using Rivada's technology on existing networks. When you consider the current economic conditions, is it likely that a new, non-incumbent provider will show up and build a national network from scratch?

Mr. ZIPPERSTEIN. I think it would be very expensive and very costly. It would be difficult for a new entrant to secure the financing. In the prior panel there was a figure of $6 to $7 billion used. Our estimates would be to build from the ground up, it would cost orders of magnitude higher than that, Mr. Chairman.

Mr. MARKEY. So you are saying it is highly unlikely——

Mr. ZIPPERSTEIN. Highly unlikely.

Mr. MARKEY [continuing]. That a new company is going to come along and build a national network?

Mr. ZIPPERSTEIN. Correct.

Mr. MARKEY. So then is it useful to look at regional D block licensees who could all be interoperable if the FCC compels it to be interoperable and also promotes greater wireless competition? Is that possible, Mr. Zipperstein?

Mr. ZIPPERSTEIN. Yes, although I would also defer to the opinions of the more expert law enforcement people on the panel, but yes, Mr. Chairman, it is possible.

Mr. MARKEY. Thank you.

Let me get on to you, Mr. Duncan. What do you think?

Admiral DUNCAN. I think exactly so, sir. The written testimony that Mr. Zipperstein submitted pointed to a $50 billion investment in his company in 8 years. That is a mature system putting on addons. The opportunity of incremental improvement directed by the needs of first responders to meet their needs I think is very attractive rather than, you know, create a whole new system from the ground up. I think Congresswoman Eshoo's observation that the spectrum is owned in trust for the public, you know, gives us some room to examine just how that would work, and our own experience is that the carriers have been very receptive in providing access to that spectrum in terms of emergency to provide services for first responders, and it would not be possible but for spectrum ownership, cooperation, organizations like ourselves and Department of Defense certifying that we could even tie into their systems and the FCC being open to new and novel approaches.

Mr. MARKEY. Let me go to Chief Dowd then. Thank you, Mr. Duncan.

What do you think?

Chief DOWD. I think the regional approach is a good idea. You know, one of the big stumbling blocks for widespread interoperability has been the simple fact that spectrum over the last 70 years was kind of doled out very haphazardly. There is an opportunity now here with different network-type platforms to build interoperability because of the commonality of the availability of the spectrum nationwide. So having that spectrum available, that green space spectrum available across the country, makes it much easier, particularly on the individual cop or firefighter's side because now it will be easier to build, you know, subscriber units, portable radios that will allow them to be interoperable from system to system.

Mr. MARKEY. Thank you.

Mr. Irving, what do you think?

Mr. IRVING. I think a single national operator would face enormous capital requirements and I think that the possibility of a regional approach is something that should be explored.

Mr. MARKEY. Thank you.

Now, one of the—I think this is the direction we are heading in actually where this conversation is taking us right now but I want to hear other views as well. Here is something, Mr. Zipperstein, that bothers me. In the Saturday Boston Globe just 3 days ago, the headline on the front page is "Dead Zones Frustrate Drivers." Verizon, AT&T, the other cell phone companies have yet to figure out how to put wires through the Tip O'Neill Tunnel and some of the other tunnels in Boston and people as they hit the tunnel all have to say honey, I am going into the tunnel, we are going to lose connection. So you can imagine how 3 years after we dedicate the Tip O'Neill Tunnel how very skeptical I am of the ability of Verizon or AT&T to solve a public safety problem if they can't solve a simple problem like this, and if I hear it once, I hear it over and over again, you know, that people are very frustrated with the cell phone companies and so this headline basically says it is going to take much, much longer, all the cell phone companies are saying, the incumbents, to be able to figure out how to put a wire through the tunnel so that people can continue to talk as they hit the tunnel. So of course, this has public safety implications, Mr. Zipperstein. That is just one little link that is a couple of miles long and Verizon and AT&T can't figure out how to do it. So what do I tell my constituents about public safety if the major companies can't figure out how to do something this simple?

Mr. ZIPPERSTEIN. Mr. Chairman, we are frustrated as well, and I thank you for raising the point. We have been very active in trying to improve the process of placing facilities, new towers to improve coverage. It is a public safety issue, but every so often we have to wind up waiting years and years and years for approval. In the case of the Tip O'Neill Tunnel and the Big Dig, we have worked with the State of Massachusetts for a long time behind the scenes individually and together with other carriers to be part of the process to enable the placement of facilities in the tunnel and we look forward to continuing to be able to achieve that.

Mr. MARKEY. Can I say this, Mr. Zipperstein? It is just unacceptable. It is just unacceptable. This is a deep insight. Do you understand? Post 9/11 6 years later, this is a deep insight as to the failures on 9/11 and the failures today, OK? It is a deep insight and it reflects actually the flawed policy of the FCC even in how all this auction has gone, to be honest with you. We don't get down to these core issues of whether or not the public is being served and what our expectations are of the telecommunications companies.

What do you do in the Lincoln Tunnel, Chief Dowd, in New York City? Do people lose their connection in the Lincoln Tunnel?

Chief DOWD. No, there is cabling that carries the signal into those tunnels, the Brooklyn Battery Tunnel, the Lincoln Tunnel, the Holland Tunnel.

Mr. MARKEY. And you know that we don't like this New York-Boston differential being publicly exposed.

Chief DOWD. As long as you don't try to put a jersey in any one of those tunnels.

Mr. MARKEY. Well, you know, Chief, honestly, we are quite proud of the fact that we were able to secure $15 billion to build the tunnel in Boston and name it after Tip O'Neill.

Chief DOWD. A fine Irishman, yes.

Mr. MARKEY. And it should be a lot simpler, in other words, building a tunnel under a city. You know, Bonnie Franklin said it would be simpler to put the city of Boston on stilts than to put this tunnel under the city of Boston, but we did it, and so I really—I hear so many complaints about the phone companies and all of my fire departments, police departments, they complain to me about the cooperation they have with the local phone companies and how quickly they respond and give them access to what they need and so I am going to say to you, Mr. Zipperstein, that I am going to use this as an example. If you can't solve this, then I am really dubious as to whether or not we should be trusting the big companies to be playing a meaningful role in providing in a time that is reasonable a public safety solution for our country.

Let me stop there and recognize the gentleman from Florida, Mr. Stearns.

Mr. STEARNS. Thank you, Mr. Chairman. Since it is eight of you here, let me just ask you to raise your hand. How many of you would support re-auctioning the D block solely for commercial purposes and passing a law to allow public safety to use the proceeds from that re-auction? OK. So there is five, and if you don't agree, raise your hand.

OK, Mr. O'Brien, why don't you agree?

Mr. O'BRIEN. It would be significantly a shortfall of what was necessary just to build the system, much less operate it, by any number that would be reasonable. I think it would be important for the Committee if those of us who are testifying submit for the record estimates of what it is going to cost to build but after having worked on this a couple of years, I have never seen a number that I have any confidence in short of about $15 billion—that is one-five—to build, and as much as several billions a year of operating expenses, which are often forgotten. So, I mean, this is a real-world crisis driven by the fact that the money necessary to solve the problem is so formidable.

Mr. STEARNS. Mr. Duncan, how much would it cost, do you think?

Admiral DUNCAN. The numbers I have heard are the ones that have been presented here today and it counsels to me that perhaps we should think whether it is appropriate to build out another network that is just for public safety. Perhaps using the systems that are there in a better way and driving the kind of performance that the chairman is talking about is the way to go on that. So to me, that number, even the low end of that number says that that is years away. Work on what we have presently and make that responsive to first responders.

Mr. STEARNS. How much do you think that would be using the existing?

Admiral DUNCAN. Our engineers have taken a look at what it would cost for us to put the type of capability we are putting across the country in first responders' hands that restore a damaged network and the best guess we have is about $500 million, which is quite a bit different than the billions of dollars that we were talking about previously. That is for restoring in a disaster.

Mr. STEARNS. Dr. Bazelon, could they get this money by raising it in an auction?

Dr. BAZELON. Not $15 billion but——

Mr. STEARNS. I mean the money Mr. Duncan is talking about.

Dr. BAZELON. Yes, easily. The D block—there was, I calculated over $3.5 billion of unmet demand on the A block alone, comparable spectrum to the D block in many ways, and a couple billion dollars would be very reasonable. But I have to add as a former CBO analyst that passing that law may run into scoring problems and——

Mr. STEARNS. Why is that?

Dr. BAZELON. Well, it depends on what is in the baseline, sir, and it is only the increase in revenue that you could spend elsewhere, which raises the point that perhaps the wiser course would be to figure out how much money public safety actually needs and give it to them.

Mr. STEARNS. Mr. McEwen?

Mr. MCEWEN. I don't think that is a practical solution. First of all, I have no expectation that the D block auction would bring the kind of money that would be necessary to do this. Secondly, we don't have enough spectrum in the public safety allocation alone to meet the needs of public safety without a partnership. So I think the point is, as Mr. Zipperstein has said, that Verizon, who is an established commercial network, if we gave them $13 billion to add to their network, they could build out the necessary requirements of public safety. The problem is that none of the existing systems that are out there really provide us the kind of reliability, the kind of coverage, the kind of issues that we need, and that is of course what I think the chairman alluded to before, if you can't through to your wife, why, how are you going to get public safety?

Mr. STEARNS. Mr. Duncan, how much spectrum for broadband communications do public safety agencies really need? Do they have enough already without the D block, either from the spectrum cleared for them by the DTV legislation or even using their existing inventory?

Admiral DUNCAN. We believe they do, sir, and the reason we can say that is because we have deployed in support of first responders in specific events, and the owners have made channels or spectrum available to us to support those events. If I could just elaborate on that cost issue, every first responder, virtually every first responder is already incurring some expense for cellular technology. What we are talking about here is in some way shifting the emphasis on that spend and putting it into a smarter spend, again, attributing the chairman's mother's counsel. Take some of that money that is already being spent and put it in another direction. It is not an additional amount of money; it is better use of the money that is there.

Mr. STEARNS. Let me just close. Mr. Zipperstein, you talked about what things we can begin to imagine with the fourth generation. Could you just talk about some of these things? I mean, I can give you two or three but I would be curious what your company is talking about in terms of this 4G.

Mr. ZIPPERSTEIN. Sure. The main difference will be the incredible speed that LTE technology, when deployed on 700 MHz spectrum, can bring to consumers. So sitting at your desktop now, you can browse the Internet in a way that you can't currently do on your cell phone or on your other wireless device. This new spectrum with this new technology will make those kinds of browsing experiences a reality for consumers in the future.

Mr. STEARNS. So you are downloading things on your phone?

Mr. ZIPPERSTEIN. Correct, and all of the applications, and there is no limit to the imagination, that can be invented, not just by us but through open development and through the requirements of the C block, which we will comply with. People in their garages, people in their laboratories can bring those new applications to our network for consumers.

Mr. STEARNS. And I would think that in the area of healthcare, telemedicine and dealing with the safety of senior citizens at home with a wireless cell phone would be a whole new area.

Mr. ZIPPERSTEIN. Absolutely.

Mr. STEARNS. All right. Thank you, Mr. Chairman.

Mr. MARKEY. The gentleman's time has expired. The chair recognizes the gentlelady from California, Ms. Eshoo.

Ms. ESHOO. Thank you, Mr. Chairman, and thank you to all the witnesses for your testimony. In listening to the testimony, I couldn't help but sit here and reminisce a little from the time I first came onto this committee, 1995, 1996, that is some time ago, and at that time I talked about and introduced legislation on interoperability and E-911 and there were very few people that were paying attention then, and of course, when our country was so tragically attacked and the aftermath and the lessons learned and now we are here trying to figure out what history—how history is going to judge the auction and what worked and what might not work and now the shortcomings in the block D, I think, my God, it takes a long time to get some of these things done. I am sorry that Mr. Shimkus isn't here. He has given wonderful leadership. He has been the co-chair along with myself and many, many members, Ms. Harman has certainly raised the issue here on interoperability and our E-911 caucus. I think that at the end of the day it just takes the political will to get things done, to fund these things well or to enhance—make sure that there is the right kind of public policy that is actually going to make these things happen.

I don't think we have too much time left to do this. I really don't. I mean, I think that this is a great country, and the fact that we don't have this thing done and now that the D block is in the shape that it is in, I guess it is an opportunity maybe to go back and do it better. So I just wanted to make that observation.

Now, in this—let me ask a couple of questions. I have an observation relative to Verizon. I really think that Verizon won the Super Bowl of the spectrum auction, and so you are the spectrum world champions, and it is a curiosity to me about why you are so concerned about Google. I mean, do any of us think that the New York Giants are upset that Tom Brady didn't have a better game or that they are upset that the referees made bad calls? I don't think so because I don't think it really matters. They are the world champions. So I just want to make that observation and I think that when you win, you shouldn't whine, but that is my view.

Now, let me ask Mr. O'Brien of Cyren Call, there have been various descriptions of the D block and where we should go from here. I want to examine a couple of things that kind of led up to where we are. Now, you, Cyren Call, act as the advisor and the liaison in negotiating with the D block licensee when there is one or if there will be done. It has been reported, and it is in their written testimony of some here, that before the auction several wireless carriers that were exploring their interest in the D block met with you and that the following—I mean, this seems to be the description—the following is the description of what they say happened, that you demanded in those meetings that the winner of the D block would be required to pay $50 million a year to Cyren Call and also lease access to the spectrum to Cyren Call below wholesale rates and that Cyren Call would then sell access to the network to public safety entities at a premium, and that it would also own the right to provide service to public safety users. That seems to me like a lot of strings attached. Does this—first of all, is this characterization correct, and if so, yes, and if not——

Mr. O'BRIEN. No, it is not.

Ms. ESHOO. It is not?

Mr. O'BRIEN. It is in every respect not correct.

Ms. ESHOO. OK. So what happened? What happened in these pre-meetings and what did you request or demand of those that were interested at that time in the D block?

Mr. O'BRIEN. Well, I certainly welcome an opportunity to answer that question.

Ms. ESHOO. Good. Go ahead.

Mr. O'BRIEN. Anybody can look on the Web site that was created——

Ms. ESHOO. No, what happened in the meeting, not on the Web site.

Mr. O'BRIEN. OK. Fine.

Ms. ESHOO. Because, see, the reason I am asking this is because some assert that these alleged demands caused a lack of interest in the D block.

Mr. O'BRIEN. I can understand completely. Were they true, you would have every reason to be upset.

Ms. ESHOO. OK. So what happened in the meetings? Did you ask for anything or say what you needed or had to have?

Mr. O'BRIEN. What we are taking exception to is the mischaracterization of the process. The Public Safety Spectrum Trust asked us to indicate to bidders where the negotiating position that public safety——

Ms. ESHOO. And what exactly were the thoughts that you expressed in the meetings? Did you meet with anyone regarding this?

Mr. O'BRIEN. Oh, absolutely. We actively sought such meetings.

Ms. ESHOO. And was there anything that you set forward? I shouldn't be having to pull teeth on this. Just tell us exactly what—was there anything that you requested or that would be a must-have for you?

Mr. O'BRIEN. These were meetings that took many hours and involved literally hundreds of details so that is part of the process of trying to give you an answer.

Ms. ESHOO. Well, to me, it doesn't sound like you want to give the answer, but if there are hundreds of things that you said, maybe you can list out the 100 and send it to the Committee so that we have an idea. In many ways we are after the fact but I think that, you know, you have a role to play in this, and if the demands are so steep and they caused a chilling effect on would-be bidders, then I think that that is something in and of itself.

Mr. O'BRIEN. Right, but I just want the record to show that——

Ms. ESHOO. My time has run out, so——

Mr. O'BRIEN [continuing]. No demands were made——

Ms. ESHOO [continuing]. If I could ask for your answer in writing, I think we would all appreciate it.

Thank you, Mr. Chairman.

Mr. MARKEY. The gentlelady's time has expired. The chair recognizes the gentlelady from California, Ms. Bono.

Ms. BONO. I thank the chair very much, and I would like to point out that the three people still here are the gentleladies from California, so it is a great committee.

Mr. MARKEY. I wish they all—no, wait. Hold on.

Ms. BONO. First of all, I would like to thank you for this hearing and the panelists for being here today. Dr. Bazelon, Mr. Zipperstein, even if the FCC creates as many of the obligations upfront as possible and lowers the reserve price, do you think we are likely to find a commercial partner to build a shared public safety network and one that meets public safety needs through a conditioned auction approach or are we better off using a government contracting model where public safety puts out a request for a proposal and negotiates with all comers?

Dr. BAZELON. The reason I think the public-private partnership is unlikely to succeed is because spectrum as a cost of commercial business, a wireless business model, as I have seen it valued in the 10 to 20 percent revenues range, and that means that if you gave away the D block, for it to be a good idea, it would have to be the case that the public-private partnership was almost a good idea on unconstrained commercial spectrum and just needed a little bit of a push to push it over free spectrum and I think it is very unlikely that the economics are such that that is the case. I think much better is a procurement model.

Ms. BONO. And Mr. Zipperstein?

Mr. ZIPPERSTEIN. I would agree with that answer.

Ms. BONO. Thank you.

Mr. ZIPPERSTEIN. I would just add that as the chairman asked me, the economic imbalance is such that even if we tinker around the edges, if we maintain the same fundamentally flawed structure, I don't think that we will produce a winner for that spectrum. I do think that this issue of interoperability is one that we should treat the same way we treat how we resolve our country's need for any other national security platform, whether it is fighter jets or submarine. Let us marry the expertise of the private sector with the needs of the public safety. Let us have an open and transparent competition so that public safety can select the system that works best for them. We have networks in the ground already. We operate and build networks. So do our competitors. We can put those to work for public safety.

Ms. BONO. Thank you.

Mr. McEwen, Mr. O'Brien, have any entities approached either of you expressing interest in bidding on restructured D block auction and partnering with you? If so, how many and who are they?

Mr. MCEWEN. Has anybody since the auction approached us and said that they are interested in bidding? Is that the question?

Ms. BONO. Yes.

Mr. MCEWEN. No, I haven't had any discussions with anybody that said specifically. We have had some indication from people that there is an interest but nobody has stepped forward anymore than there were before the auction.

Ms. BONO. All right. Mr. O'Brien?

Mr. O'BRIEN. Let me make sure I understand the question. We did have conversations with, I would say, a half a dozen companies including companies like AT&T and Verizon and Google and Frontline prior to the auction at which at length we discussed the potential that that might be coming to the auction. Of course, that is far from an agreement on their part to come to the auction as it turned out. Since then, from like the 3rd of April, which is just a handful of days ago, we have started the process of reaching out and we have meetings set up with a number of potential parties that we will discuss this with but I don't think it would be fair to them to characterize at this stage what their level of interest was. I will know that a lot better after the next couple of weeks——

Ms. BONO. Can you be——

Mr. O'BRIEN [continuing]. But we are in that process.

Ms. BONO MACK [continuing]. A little more specific as to the types of entities or the number?

Mr. O'BRIEN. The types of entities are established operators, vendors and other players in the telecom space that, you know, might be logical to be part of a consortium. We are looking at this point that the most likely outcome for the next D block will be a consortium of players rather than a single player.

Ms. BONO. All right. Thank you.

Mr. Chairman, I yield back the balance of my time unless you want to finish singing the song.

Mr. MARKEY. As a duet I would.

Ms. BONO. No, thank you. I yield back.

Mr. MARKEY. The gentlelady's time has expired. The chair recognizes the gentlelady from California, Ms. Harman.

Ms. HARMAN. Thank you, Mr. Chairman, and the California Mafia is here and ready to take over this committee at any time.

I have to say there seems to be a total disconnect between the last panel and this panel. The last panel was very clear, certainly in answer to questions by me and others, about the need at least to give the public-private partnership another shot. I think that is not a universal opinion of the members of this committee but certainly some of us think that is the way to go. This panel is in a different place. Most of you are in a different place. And what worries me about that different place is, it seems to me that we have ample evidence 7 years after 9/11 that letting this—leaving this to the private sector, to the marketplace, won't get us a solution.

So I am sitting here quite disappointed in this panel as a whole because I think that many of you understand the technology far better than I do, understand the imperative to protect our country far better than I do, because many of you have been doing this, and understand, and all of you understand what a variety of options that could be explored better than we have yet explored them, but let me just ask it this way. Would you raise your hands if in the years between 9/11 and the call by the 9/11 Commission for true national interoperability, raise your hands if your company offered in that interim, which was about 3 years, to build a nationwide interoperable broadband network for public safety users. Did any of you offer to do that in those years? Would you raise your hands if you know of a wireless company that offered in those years to build two public safety specifications a nationwide interoperable broadband network for public safety users?

I do know that after the 9/11 Commission recommended that this happen, that some of you did respond, but until that time none of you responded and yet some people are telling us that the best way to get a nationwide interoperable public safety network is to dismantle the D block partnership and hope that the wireless industry will build it. Well, I am skeptical that that will get us there and I listened up, one of you said, "There is a business case for successful public-private partnership." Well, OK, I think maybe there is a business case. I would say there is a public imperative for a successful public-private partnership. Regardless of whether we call it the D block or we call it a banana milkshake, if we don't marry the public need to protect our communities with the private sector competence, we won't get there from here. Does anyone disagree with that? Any of you? Raise your hand if you disagree with what I just said.

So where does that take me? I guess I would like to hang in for 1 minute and 25 seconds with my view that we need to give the D block one more shot and also my view that if we proceed, as some of you have suggested, to build out connections among regions, that we may get a least common denominator connection among regions but it is my view that what we will end up with is some regions inadequately protected and I believe that if we have near-simultaneous attacks around our country or the kinds of natural disasters that we have seen lately, that some regions of our country won't have adequate communications capabilities.

So let me just ask in 30 seconds whether any of you disagrees, if we were to build out or try a second round of auction on the D block with these three criteria—one is clarity, making it clear up front what people are bidding on, the second is transparency, making it clear what the terms are between and among the parties and third is avoiding D block light, that is, just checking a few boxes and not really learning the lessons of what went wrong. Do any of you disagree that that is a sensible way to proceed if we are going to try another shot at the D block auction?

Thank you, Mr. Chairman.

Mr. MARKEY. The gentlelady's time has expired, and do you all remember Perry Mason when at the end of each episode, you know, it looked like he couldn't solve the case and then all of a sudden right at the end, Della Street would go up to him and say, Perry, can I take you off to the side for a second, I think I have got some key information, you know, right at the end just when you thought it was all over, the show? Well, that has just happened to this hearing. Chairman Dingell just walked in so he has all new information which I think he would like to elicit from the panel, and whenever the gentleman from Michigan is ready, he is recognized for as much time as he may consume.

Mr. DINGELL. Mr. Chairman, thank you.

I have been greatly interested by some of the comments that have been set forward today. First, thank you, Mr. Chairman.

Mr. O'Brien, you made some very interesting comments. You said Congress should appropriate monies for PSST to fulfill the duties imposed by FCC rules. Cyren Call will continue to assist the PSST in negotiating agreements with the winner of the D block, and law firms and other entities that provide services to the PSST expect to be paid for their services. I gather that you and Cyren Call intend then to work for the PSST but not for free. Is that correct?

Mr. O'BRIEN. That is correct, Congressman.

Mr. DINGELL. All right. Now, I am curious. This is a yes or no question. Do you agree that every dollar spent on paying advisors to the PSST is a dollar that could be spent reducing the costs to public safety of using its broadband network?

Mr. O'BRIEN. Yes.

Mr. DINGELL. Now, I am curious. Who then—well, let me go to the next set of questions here. This is for Mr. McEwen and Mr. O'Brien. In the FCC order establishing the public safety licensee, the Commission clearly stated, "No commercial interest may be held in the license and no commercial interest may participate in the management of the licensee." Mr. O'Brien, is it true that Cyren Call received funding from venture capital funds?

Mr. O'BRIEN. Is that true?

Mr. DINGELL. Yes or no.

Mr. O'BRIEN. Cyren Call, yes.

Mr. DINGELL. Mr. McEwen, isn't it true that the PSST received funding from venture capital funds either directly or through Cyren Call?

Mr. MCEWEN. Yes.

Mr. DINGELL. Now, Mr. O'Brien, if PSST is getting its money from you and you are getting your money from venture capital funds, how does the arrangement not violate the FCC's order?

Mr. O'BRIEN. The arrangement is set up as a loan from Cyren Call to the PSST, which we did not view to be a violation of that provision.

Mr. DINGELL. The order says, "No commercial interest may participate in the management of the license." They are making money available. And I am——

Mr. O'BRIEN. We are not participating.

Mr. DINGELL. What remarkable goodness is compelling them to make this money available without expecting some kind of control or some kind of return to justify their expenditure to their investors?

Mr. O'BRIEN. Maybe we should have Chief McEwen answer that too, but my answer is, the expectation is that in an arrangement to be determined, which has not been determined, we would seek to play a role in the next chapter of whatever happens between the public safety and D block and that would definitely be an interesting opportunity that we have made no secret that we were pursuing.

Mr. MCEWEN. Mr. Chairman, could I address the question?

Mr. DINGELL. Yes.

Mr. MCEWEN. OK. The money that you are talking about is, as Mr. O'Brien said, it is a loan to the Public Safety Spectrum Trust, a not-for-profit corporation. We have to pay that back and that is coming from venture capitalists but the problem here is that the Congress nor the FCC nor anybody else has offered us any funding nor alternative to solving the problem of the expenses that we must incur to meet our responsibilities.

Mr. DINGELL. Can you tell us, if you please, who are these goodhearted venture capital folk that are making these monies available?

Mr. O'BRIEN. Yes, sir. It is no secret, there is, like, five venture capital firms. We will submit them on the record, all major venture capital firms. But let me make sure you understand the distinction. They invested in Cyren Call so that Cyren Call would be able to loan money to the PSST to bridge them from now to some opportunity in which they will get access to funding.

Mr. DINGELL. Now, if the PSST doesn't have funding, how will it pay back Cyren Call's loan?

Mr. O'BRIEN. Well, under the worst-case scenario, it won't, and that is the risk we had to take.

Mr. MCEWEN. The PSST, Mr. Chairman, has no assets, and assuming that there is no other funding that comes forth from a D block partnership to pay back those funds, then we really basically will have no way to pay it back and those people that invested that money in the loan understand that. They understand there is a certain risk.

Mr. DINGELL. Are there any written documents supporting this funding that is flowing from these venture capital firms to Cyren Call?

Mr. O'BRIEN. Absolutely. This was negotiated on behalf of the PSST through their counsel and the counsel of Cyren.

Mr. DINGELL. Would you submit to us, please, the written documents that relate to the transfer of these funds from the venture capital firms to Cyren Call and then the written documents that relate to the transfer of the funds from Cyren Call to PSST?

Mr. O'BRIEN. Yes, sir.

Mr. MCEWEN. Yes, sir. We have nothing to hide. There is no reason for you not to see those.

Mr. DINGELL. I think I have used more time than I am entitled to, Mr. Chairman.

Mr. MARKEY. No, no.

Mr. DINGELL. All right. Well, with your generosity, then we will proceed.

There are reports, Mr. O'Brien and Mr. McEwen, that Cyren Call and/or the PSST informed potential D block bidders that the winning bidder would have to pay a license fee of approximately $50 million a year for 10 years to use the public safety's broadband spectrum. Is that true?

Mr. MCEWEN. No, it is not true.

Mr. DINGELL. Is it not true?

Mr. MCEWEN. Not as you described it, it is not true.

Mr. DINGELL. Well, what did Cyren Call and the PSST say to potential D block bidders?

Mr. MCEWEN. I authorized from the PSST—first of all, the relationship is very simple with the PSST and Cyren. They work for us. We are paying them for their services with the loan that we borrowed.

Mr. DINGELL. Now, who is this that works for you?

Mr. MCEWEN. Cyren Call is working for us as our advisors and we are paying them for their services with the loan that we have obtained. So the point is that at the end of the day, they do what we ask them to do. They are working at our direction.

Mr. DINGELL. Now, what did you ask them to do?

Mr. MCEWEN. Pardon?

Mr. DINGELL. What was it that you asked them to do?

Mr. MCEWEN. One of the things that you are raising is, what did they say before the auction to potential bidders. We had a number of meetings with a number of people who had indicated an interest in the process.

Mr. DINGELL. So you had them communicate with the people who indicated interest, right?

Mr. MCEWEN. They did, and we did.

Mr. DINGELL. What did you instruct them to tell them?

Mr. MCEWEN. Well, first of all, they asked a lot of questions about what——

Mr. DINGELL. They asked a lot of questions? Who is "they"?

Mr. MCEWEN. I am talking about the potential bidders, people who had an interest in——

Mr. DINGELL. So the bidders asked a lot of questions?

Mr. MCEWEN. That is right, and some of them expected more information as it related to the kinds of financial expectations of the PSST in a negotiated process. In that negotiated process, there would be a discussion about how we would be reimbursed for our costs in running our side of the operation.

Mr. DINGELL. How you would be, how the PSST would be reimbursed?

Mr. MCEWEN. Right. Exactly.

Mr. DINGELL. And who was it that asked this? Was it Cyren Call or was it——

Mr. MCEWEN. Oh, no, no, no. The potential bidders were people like Frontline Wireless, Verizon, AT&T. There were a number of people that talked to us before the auction about the process, inquiring about certain aspects of our expectations, and in those discussions, I never gave them any number but my understanding is that Mr. O'Brien did and we certainly were aware of that, and there was an estimate of $50 million but as far as I know, nobody ever demanded anything of anybody.

Mr. DINGELL. What did Cyren Call tell them then?

Mr. MCEWEN. I will let him tell you that.

Mr. O'BRIEN. Sir, yes. In response to meetings, many of which took a number of hours and there were a sequence of meetings with some of these players, we said that in anticipation of a negotiation which would commence after the auction, the going-in position in that negotiation was likely to be that the PSST would ask for a $50-million-a-year annual payment as the transfer of value for use of the spectrum but that that was subject to and it was made explicit in our bid information document, which is online, that that was subject to a half a dozen different conditions which would be part of the negotiated process during the NSA.

Mr. DINGELL. What were those conditions and who was fixing the conditions? Were those conditions that were fixed by statute, by regulation, by the FCC, by——

Mr. O'BRIEN. Sir, the expectation——

Mr. DINGELL [continuing]. Some other person? Who was fixing those conditions?

Mr. O'BRIEN. Under the terms of the FCC's order, the negotiation would commence as soon as the auction was over. The negotiation would have three parties: the PSST, the D block winner, and FCC. And it was our expectation and it was made explicit that the FCC would have to approve any such condition.

Mr. DINGELL. So——

Mr. O'BRIEN. So what we take issue with is anybody saying that in that context the Public Safety Spectrum Trust could or would make demands because everything was subject to—explicitly subject to the negotiation that would commence as soon as the auction was over.

Mr. DINGELL. I am curious though, what was your authority to inform them that you were going to charge them $50 million a year for 10 years?

Mr. O'BRIEN. We were engaged by the Public Safety Spectrum Trust, which had at that point become a licensee of the FCC, to help the PSST prepare for the auction, the negotiation that would take place, the network sharing agreement.

Mr. DINGELL. Now, what was the $50 million a year to be for?

Mr. O'BRIEN. It was to be a lease payment in return for the lease of the spectrum and the use of the proceeds would be as determined by the PSST to meets its operating cost.

Mr. DINGELL. I am proceeding at the pleasure of the chair.

Mr. MARKEY. No, please, and the chair is pleased.

Mr. DINGELL. I am curious. What was the benefit that was to be achieved by Cyren Call or Cyren Call's investors? In other words, was there a profit? Were there some payments here? What were they getting for this?

Mr. O'BRIEN. The relationship between the Public Safety Spectrum Trust and Cyren—and we will submit to you the documents that set that relationship up as it currently exists. We are going to put those on the record. Beyond that, there is no relationship. There is an expectation once there is a successful D block auction and a network sharing agreement is reached, that Cyren Call could, and I emphasize could, play a role if asked to by the PSST and that is the expectation of our shareholders. Of course, as you are undoubtedly aware, there is a significant amount of risk to the shareholders of Cyren Call in that expectation but that was how we proceeded.

Mr. DINGELL. Did this have any current value at the time that the negotiations were going on that would show up in the books of Cyren Call or PSST or anybody else?

Mr. O'BRIEN. No, with the explicit exception that any funds that we were advancing according to the loan documents were going to be treated as loans and paid back. No, there was no such expectation.

Mr. DINGELL. Well, is there any monetary value to this as of that particular time that we can assign to this at all? In other words, did it have any worth or was it just sort of goodwill, you know, we will do all these good things and we will derive our benefit at some future time?

Mr. O'BRIEN. Congressman, since April of 2006 when we first proposed that something along these lines be done, we made it clear that Cyren Call would hope and would do everything it could to be selected to play a role in this because we think it is such an important role to play and that it should be played if not by us, by somebody like us. We have done everything we could to make that clear and public.

Mr. DINGELL. So in response to my question, you are telling me that you don't believe that this had any exact or definable cash value at this point in the transaction? Is that right?

Mr. O'BRIEN. Because of the risk, yes, I would say I agree with you completely.

Mr. DINGELL. All right. Now, can you tell me what the $50 million that you were telling them was going to be a payment that would have to be made to the PSST, what was that going to go for?

Mr. O'BRIEN. This would—this is a better question for Chief McEwen to answer but what I told the potential bidders when asked is, it would meet the expected operating costs of the PSST as it met its obligations under the FCC's rules.

Mr. DINGELL. Now here comes John Dingell, fat, dumb, and happy. He is walking in and he is talking to his friend, Mr. O'Brien, and he says, Mr. O'Brien, what is this going to cost me, and you are going to say it is going to cost you $50 million a year, and I am saying now, what am I going to get for that $50 million a year. What am I going to get for that $50 million?

Mr. O'BRIEN. OK. Let me explain something. The bulk of the value that the D block winner would get for the $50 million or any other lease payment that was negotiated would be use of the 10 MHz of spectrum being contributed by the PSST when the Public

Safety Spectrum Trust was not using it. That is kind of—as we understand it, that is the essence of the Commission's public-private partnership is the D block winner buys 10 MHz and then pairs that 10 MHz with a lease for 10 MHz coming from the Public Safety Spectrum Trust. So you can have a legitimate difference of opinion about what is the value of the use of that spectrum, and some of the panelists here say they don't put much value on it. What is the value of the use of that spectrum that public safety is giving under the terms of the lease to the D block? We said acting under instructions from the PSST that we would begin the negotiation process to determine that number at $50 million. Those were the instructions we were given.

Mr. DINGELL. So here is fat, dumb, and happy John Dingell saying now, how much is Cyren Call going to get out of this?

Mr. O'BRIEN. And the answer to Congressman Dingell would be, that would be determined subsequently by PSST when they decided how to compensate Cyren for responsibilities that they hadn't determined yet and other consultants of Cyren and other expenses such as their rent or whatever else.

Mr. DINGELL. Now, do you bring Mr. McEwen in to talk to me on this matter? Supposing I say well, now, I would like to talk to the PSST and maybe you can raise that so you get——

Mr. O'BRIEN. Sir, let me make something——

Mr. DINGELL. Would you then get Mr. McEwen on the phone and Mr. McEwen——

Mr. O'BRIEN. Let me just make something clear.

Mr. DINGELL [continuing]. Would come in and tell me things?

Mr. O'BRIEN. As often as possible, the meetings that we had with potential bidders for the D block in a very compressed time frame included both Cyren Call representatives and representatives from the PSST but Chief McEwen is so busy, he could not be at every meeting and the meetings started to be sometimes multiple meetings in a day with different bidders. So we did the best we could.

Mr. DINGELL. And supposing I had this tremendous curious streak in which I say well, I am going to talk to Mr. McEwen, so I call Mr. McEwen up or would you produce Mr. McEwen and he would then talk to me, or what would happen? Would he have any part in this discussion or not?

Mr. MCEWEN. Did I?

Mr. DINGELL. I am sorry?

Mr. MCEWEN. I am not quite sure I understand your question. I mean, the point is, I had many meetings with people, one of them sitting at this table.

Mr. DINGELL. We are trying to understand how this negotiation takes place so I can kind of understand who is telling who what and who is saying who is going to get what for what they do.

Mr. MCEWEN. OK. Well, let me try to explain it briefly. We had many meetings with people, like I said, who were interested in the process and they asked a lot of questions about what did we expect from public safety's point of view would be included as our expectations in some kind of a partnership, this network.

Mr. DINGELL. Now, what are you going to do with this $50 million that you are getting and how much are you going to give to Mr. O'Brien for his goodhearted help to you?

Mr. MCEWEN. I would be glad to spend as much time as you would like but I don't have any of the numbers in front of me. It is a complex thing and this was based upon some estimates——

Mr. DINGELL. Well, obviously you have got some numbers in mind when you are talking about $50 million. We are going to give Mr. O'Brien this much and we are going to keep this much and so much money is going somewhere else.

Mr. MCEWEN. There were some expectations as to what the $50 million was going to be spent on but I don't have any of the numbers in front of me here. I would be glad to sit down with any of the members of the committee or give you some further explanation but the point is that, I mean, you are suggesting that this money is all going to go to Cyren Call and that is far from true. We have legal expenses, we have——

Mr. DINGELL. My question is, how much is Cyren Call going to get and——

Mr. MCEWEN. I can't answer that question at the moment. Mr. O'Brien might give you an estimate but I don't have that number in front of me.

Mr. O'BRIEN. Congressman, I don't know how to answer it other than to say we have no arrangement with the PSST under which we would be paid anything other than paid back for the amount of money that had been borrowed. Did we have an expectation, did we make that expectation public, have I discussed it with many members of Congress and many staffers that are here today that we had that expectation? Yes, subject to being selected by the PSST. Let there be no doubt about this: The Cyren Call employees, including myself, we have one client. It is the Public Safety Spectrum Trust. We worked for them under instructions from them. That is what we sought. That is what we are. We may or may not have a continuing role after a D block auction because the PSST may decide to keep us and may not. That was the risk we took. That is the fact.

Mr. DINGELL. Now, let me ask this. Let us say that you told me, here I am getting ready to bid on this thing and you say oh, but you are going to have put $50 million in to PSST, and what would my response—every year. Would I say, this has been a wonderful visit, I really thank you, I am looking at my watch and I know I am supposed to pick up my wife for a shopping trip this afternoon. How many folks did that when you would tell them it is going to cost $50 million? Did they all of a sudden decide they had to be somewhere else, to do something else?

Mr. O'BRIEN. Sir, we are not talking about a large universe of potential bidders but in that universe, there was no such response.

Mr. DINGELL. Gentlemen, thank you.

I think, Mr. Chairman, we are going to want to look a little bit further at these matters to see what it all means. In the meantime, I would request that you submit to us any agreements, books, records and papers relative to these matters so that we can see whether the committee has further interest in these matters.

Mr. MARKEY. And we would request——

Mr. O'BRIEN. Absolutely, I have agreed to do so.

Mr. MARKEY. We request that you submit it in a timely fashion. We thank you.

Without objection, a written statement from Karen Tandy of Motorola will be entered into the record.

[The information follows:]

Written Statement

of

Karen P. Tandy

Senior Vice President, Global Government Affairs

Motorola, Inc.

Before the

Committee on Energy and Commerce,

Subcommittee on Telecommunications and the Internet

United States House of Representatives

April 15, 2008

Good Morning Chairman Markey, Chairman Dingell, Ranking Minority Member Stearns, Ranking Minority Member Barton, and other distinguished Members of this Subcommittee. I am Karen Tandy, Senior Vice President for Global Government Affairs at Motorola. I appreciate the opportunity to provide testimony to this Subcommittee regarding the recent 700 MHz auction conducted by the Federal Communications Commission (the Commission). In particular, I also will discuss what the Commission can and should do to ensure that our nation's first responders have access to interoperable communications systems that enable them to send and receive high-quality data, graphics, and video in a mobile environment.

I would like to begin by commending Congress, and, in particular, this Committee, for its leadership in making spectrum available to first responders and consumers. Chairmen Dingell and Markey led the way in 1993 to substantially increase the amount of spectrum made available for commercial mobile services. The auctions that followed the Omnibus Budget Reconciliation Act of 1993 represent an important inflection point in the history of the commercial wireless industry.

And, in 1997, this Committee again led the way by beginning the process of opening up the 700 MHz band for commercial use, and setting aside 24 MHz for public safety. Furthermore, when this Committee was led by Congressmen Barton and Upton, you passed, and Congress enacted, the Digital Television and Public Safety Act of 2005 as part of the Deficit Reduction Act, which set the upcoming February 17, 2009 deadline for the end of the Digital Television Transition to free up the very spectrum we are discussing today.

Thank you all for being commercial wireless and public safety communications pioneers through sound policy development.

Eight decades of heritage and expertise in addressing the needs of public safety and commercial networks provides Motorola unparalleled insight into the public safety-commercial network spectrum licensing dialogue. Pioneering wireless technology in the 1930s through police car radios and public safety radio networks, revolutionizing communications with the first commercial handheld cellular phone in the 1980s, and ever since building out next generation telecommunications networks here and abroad, gives Motorola unique insight into the opportunities and challenges in the mobile communications and spectrum licensing arenas. We are committed to continued investment in mobile technologies to expand our extensive portfolio of end-to-end solutions to meet the communications requirements of government agencies, public safety and commercial network service providers into the future. Driven by a passion to invent and an unceasing commitment to advance the way the world connects, Motorola is at the center of how governments, private enterprise and consumers engage with mobile technology.

By way of background, before joining Motorola, I spent nearly 30 years in law enforcement, most recently as the Administrator of the Drug Enforcement Administration (DEA). My experience has taught me, firsthand, that the ability for first responders to communicate with each other, and, especially, across multiple agencies is critical to public safety and to ensure that our nation can prevent and mitigate man-made and natural disasters as well as other life-threatening events.

While far from complete, much progress has been made toward providing interoperability for mission critical voice communications based on the national voluntary consensus standard known as Project 25 (P25). These P25 interoperable networks form the backbone of first responder communications and will continue to play a critical role into the foreseeable future. Unfortunately the same cannot be said for networks capable of providing first responders with access to the data, graphics, and video in a real-time mobile environment that they desperately need to respond as effectively and safely as possible. As the Commission contemplates changes to the 700 MHz rules to prepare for the reauction of the D Block, it should explore all options that will speed the availability of advanced mobile data services to first responders.

The Commission is pursuing an extremely laudable goal in the 700 MHz band. We need to get more spectrum in the hands of our nation's first responders and into their productive use as soon as possible. But first responders need more than just spectrum. First responders need the tools necessary to harness that spectrum to save lives. Working hand-in-hand with the private sector, public safety can exploit the benefits of interoperable broadband communications throughout the nation.

Motorola commends the Commission's decision to utilize the D Block to facilitate a nationwide broadband network for public safety. Such a network could provide the type of interoperability and data sharing among first responders that has been sorely lacking in many areas. While the responsibilities of the D Block licensee may need to be modified, the Commission should not deviate from its fundamental plan to make the D Block, in conjunction with 700 MHz public safety spectrum that has been licensed to the Public Safety Spectrum Trust (PSST), available to public safety agencies on a priority basis for advanced mobile data solutions. However, in using a public/private partnership to meet critical public safety requirements, we cannot lose sight of the need to ensure that the commercial component of the network is viable. A truly self sustaining solution will require a careful balancing of public safety and commercial interests and requirements.

Additionally, a nationwide public safety broadband network is a ***long-term*** solution to the urgent communications needs of first responders. This network will not be available in most areas for many years. The Commission rules require the D Block licensee to provide service to at least 75 percent of the population of the nationwide D Block license area within four years, 95 percent of the population within seven years, and 99.3 percent of the population within ten years.

While the broadband plan for public safety contemplated by the Commission's rules is a laudable goal, this timeline for modernizing public safety communications systems is unacceptable from a homeland security and public safety perspective. For some of the most densely populated areas, such as the Boston, Ocala, Detroit, and Dallas-Forth Worth Metroplexes, the public safety broadband network may not be available for four years under the Commission's plan. In less populated areas, such as Michigan's Upper Peninsula or Eastern Oregon, the network may not be available for as long as ten years. The United

States cannot afford to wait that long to improve our first responders' communications capabilities.

My testimony today first will address Motorola's support for a nationwide public safety data network, and identify the particular challenges associated with deploying this network. Next, I will discuss the need to modify the Commission's rules to ensure open competition in bidding and greater flexibility to meet buildout and interoperability requirements. My testimony will conclude with a discussion of the financial viability of providing a nationwide broadband network for public safety.

A. In Support of a Public Safety Data Network

There is a critical need for first responders throughout the nation to have access to data and video applications in a mobile environment. The D Block, in conjunction with spectrum from the 700 MHz's public safety band licensed to the PSST, should be utilized to create a nationwide broadband network for first responders. This must be done while creating a viable commercial business opportunity for the D Block operator. The focus should remain on creating a solution that provides primary service and priority access for public safety, but the implementation rules for the D Block licensee must not be so onerous as to create an unattractive business case for the D Block licensee.

Motorola supports the following public safety goals for the national broadband network, including:

- Capacity to support high speed data and video tools to enhance prevention/response and supplement mission critical voice networks;
- Coverage designed to meet public safety requirements;
- Network design needed to ensure first responders have reliable data/video service even during natural or man-made disasters:
- Interoperability among multiple levels of governments and jurisdictions;
- A source of funding to build out a state-of-the-art 4G network; and
- Availability of subscriber equipment meeting public safety needs from multiple sources.

Meeting these needs through a public/private partnership is a unique approach that faces significant challenges. This approach attempts, for the first time, to merge the conflicting goals of deploying a cost-effective commercial network capable of competing in a highly competitive market with the need for more costly public-safety grade infrastructure that ensures coverage in very low density population areas, extended backup power, and transport redundancy to provide maximum network availability to meet the specialized needs of public safety. If this approach is to be successful, the Commission must recognize the inherent difficulties in meeting these goals and develop a realistic approach that balances and resolves these competing requirements.

If the Commission and industry are dedicated to providing much needed broadband data services for public safety through a public/private partnership, we must focus on that as our goal and be prepared to back it with the financial resources necessary to make it happen. While providing additional competition for commercial broadband is a laudable goal, we should not jeopardize our primary goal of providing broadband to public safety by layering on competing requirements that will place critical broadband interoperability beyond the reach of many first responders for another decade. If the Commission muddles the priorities and focus of this effort, or overloads it with unrealistic expectations, broadband interoperability across America is doomed to failure.

Accordingly, as the Commission considers next steps, it should not place artificial constraints on which entities would be eligible to bid on the D Block license. It is simply unrealistic to limit eligibility to new entrants without wireless business experience and, at the same time, expect an entity to come forward with the financial and qualified operational resources necessary to deploy and operate a nationwide network that meets the needs of public safety.

Likewise, it is unrealistic to expect that a commercial carrier could bear the cost of deploying a public shareowner or private equity funded commercial network meeting the coverage and reliability requirements that exist under the current rules, with no assurances that there will actually be public safety users in those remote areas where commercial networks do not normally exist and are otherwise cost prohibitive. We must create a more realistic balance of interests and risks by providing greater flexibility for meeting the buildout requirements, while not losing sight of the goal of building a nationwide interoperable broadband network designed to meet the needs of public safety.

Rather than place artificial and overly prescriptive constraints on the PSST and the operator partner(s), the Commission needs to provide these entities the flexibility to explore the most effective strategies for achieving critical public safety objectives. These parties are best-positioned to explore alternatives and determine how they can accommodate each others' needs. It is simply not possible for the government to dictate the details of how a nationwide broadband network should be built and deployed and expect that network to be successful. While government approval and oversight is necessary to ensure that the public interest is met by providing public safety with access to the services needed by first responders, the requirements should not be so burdensome that no one takes on the risk, or if they do, that they can't sustain it.

B. Open Competition to Provide Services

The Commission's rules must allow open competition for bidders willing to step up to the challenge of this public/private partnership. The wireless industry is highly competitive, and the challenge of building a new commercially competitive network cannot be underestimated. Multiple 3G networks designed for the consumer market already exist, and new 3G or 4G networks will be deployed in the Advanced Wireless Services (AWS) and 700 MHz bands as a result of the recent auctions. The D Block licensee will need to compete on price, performance, and capacity against these existing and future networks.

To serve the consumer market, the D block operator will need to be able to purchase and deploy infrastructure and device technology that has significant volume and scale economies to be able to offer competitive products and services. Augmenting the commercial network to meet public safety requirements will require more sites, incremental backup power, site hardening, transport redundancy, and more features than simply building another network targeted to the consumer market. Significant capital will be needed to meet the nationwide population coverage mandate and, unlike other commercial networks, the buildout will be driven by regulatory mandate rather than customer demand.

Given the hyper-competitive environment and cost-intensive network requirements, it simply does not make sense to reduce the chance of successfully deploying a nationwide network to serve public safety by placing limits on which entities can bid on the D Block license. While encouraging competition is commendable, we should not allow competing goals to limit our chances of success. The bidding should be open to all entities willing to embrace the challenge of meeting the needs of public safety, while at the same time creating economic value in a hotly contested market.

C. Greater Flexibility to Meet Buildout and Interoperability Requirements

The current requirement that the network provide coverage to 99.3% of the population within 10 years creates a high burden that is unlikely to be achieved by a single operator deploying a nationwide network. This requirement would result in buildout that significantly exceeds that achieved by current commercial carriers, and would cover areas where the level of consumer demand likely would not warrant construction on an economic return basis. From a competitive perspective, it makes little sense for an operator to deploy in these areas unless public safety agencies express a need for the network, a desire to subscribe for service, and the willingness to support the payback required to create a viable business case for the operator. While, from a public safety perspective, the nationwide broadband network would ideally be deployed as rapidly as possible to all parts of the country, realistically, the network is likely to provide these critical services in urban and suburban areas substantially sooner than in rural areas.

With this understanding, the buildout requirements should be adjusted to provide additional buildout options and greater assurances that the network will be used where it is built. The rules should provide mechanisms that enable earlier access to mobile data and video in lower density areas that otherwise would be addressed later by the network operator. For example, public safety agencies should be encouraged, including financially, to build out networks in areas where the nationwide network will not be constructed in a timeframe that meets the agencies' needs. While the current rules allow individual agencies to build, with the concurrence of the PSST, in areas where the nationwide network operator does not intend to build, or build in an acceptable timeframe, the rules require that the locally-constructed network be turned over for management by the D block licensee. Such a paradox will significantly discourage deployment of mobile data and video networks by individual public safety agencies, even in less populated areas where the nationwide network may be unable to provide service for many years to come.

Motorola recommends that the Commission's rules be modified to encourage buildout by local or state agencies or regional public safety consortiums, on public safety spectrum licensed to the PSST, subject to provisions established by the PSST that ensure interoperability with the nationwide commercial broadband network. In such a situation, because these networks would be paid for by these public safety agencies, the agencies should control and operate them. The commercial operator would not automatically have the authority to take over the network, but could do so upon successfully negotiating an agreement with the public safety agency that constructed the network.

Alternatively, the public safety agency and the commercial operator could reach some other arrangement such as entering into a roaming arrangement, whereby, commercial customers can roam on the private broadband network and vice versa for reasonable compensation in each direction. As a benefit to allowing buildout by state and local agencies, the D Block licensee should be allowed to credit any resultant local/state/regional coverage toward its buildout requirements for the nationwide system, regardless of whether the local system is operated by the local agency or the nationwide network operator.

This structure could speed the availability of data and video in rural areas, while easing an untenable buildout requirement that currently rests solely on the shoulders of a commercial operator. Interoperability would continue to be of paramount importance. Ultimately the local public safety entity and the nationwide operator may have natural incentives to combine networks under acceptable terms: the public safety entity to ease the burden and cost of running and maintaining its own network, and the commercial operator to improve coverage. This approach would provide a balance of market forces and public safety requirements to achieve the ultimate goal of nationwide broadband interoperability without the forced structure that the current rules would create.

In addition, the requirements for buildout should be structured in such a way that the network operator is not forced to build out in areas where no clear demand exists. Because there is no requirement that public safety subscribe to and use the nationwide network, there is no assurance that there will be sufficient, or any, public safety subscribers to the system in rural areas where there is no financial incentive to build a commercial system. The exact terms of what should trigger the buildout requirement should be negotiated between the PSST and the commercial operator.

Finally, there should be no technological restrictions imposed by the Commission on use of the spectrum. The requirements for the network should focus on the primary goal – a nationwide, interoperable broadband network – and not the details of achieving the goal. To help ensure that the operator can deploy a commercially viable network, flexibility should be provided to use the most appropriate and cost-effective technological solution, conditioned on the need also to ensure interoperability, so that the goal of a nationwide interoperable network is achieved. Any technology decisions by the D-block operator and the PSST will need to be based on the recognition that the commercial network will only be economically competitive if devices are able to roam throughout the entire combined D block and public safety broadband block so that they are able to roam between islands of coverage in the nationwide footprint. We believe that this proposal would provide a win/win, in multiples, for the D Block operator, public safety agencies, the PSST, and the American public.

D. Supporting a Financially Viable Network

The challenges associated with building a new, advanced broadband data network to meet public safety requirements and to achieve commercial viability should not be underestimated. The coverage, reliability, and features inherent in meeting public safety agencies' needs will require additional capital for construction, operation, and maintenance, far beyond that required for a normal commercial network. Attracting commercial customers will require that devices for commercial subscribers be competitive in features and price, that data throughput rates be competitive, and that service pricing for use of the nationwide network be competitive with other commercial networks. In contrast, public safety users of the network may require devices designed to operate in a more rigorous environment and with additional features beyond those normally needed by consumers. Public safety entities must be able to deploy specialized equipment on the network to ensure that their needs are met, and that they have access to the latest in public safety applications. Any rules must preserve public safety's ability to have competition for devices and to deploy devices that best suit their needs.

Congress should enhance the viability of the public/private nationwide network by providing greater assurance that there will be anchor tenants and some funding supplements for public safety to deploy in coverage areas that are not commercially viable. We recommend that Congress and the Administration look at other existing programs that could benefit from use of the 700 MHz broadband network. For example, the Intelligent Transportation System (ITS) initiative could benefit from the coverage and capacity available on the 700 MHz network, and funding for that program could be directed to deploy systems and services on the 700 MHz broadband network. The 700 MHz network could also be a critical tool in making a national crime database and nationwide alerting accessible to local, state, and federal public safety agencies and first responders in the field. Therefore, a portion of the regular funding associated with those preexisting goals also could be considered for direction toward deployment and use of the 700 MHz nationwide broadband data network.

On a related note, it will be important not to mistake any use of existing funding for these tenants, such as ITS, to access the D Block in any way diminishes the need for Congress to continue to provide substantial resources to other existing federal programs that make interoperability an eligible expense. To that end, I encourage Members of this Committee and the Congress, at large, to annually appropriate needed funds to help meet the requirements of the nation's state and local first responders, principally through the Departments of Homeland Security and Justice. I urge you to continue to fully fund these vital programs at least at the levels provided for fiscal year 2008. As you know, your leadership and support are vital to fund key programs that enable police, fire, and emergency medical professionals to carry out their critical missions.

Conclusion

Again, thank you for this opportunity to present Motorola's views on this important subject. Motorola appreciates this Committee's leadership on spectrum issues, and the attention that the Committee has devoted to providing first responders with the communications tools necessary to perform their homeland security functions day to day and in times of emergency.

Mr. MARKEY. We thank this panel. You can see that the interest level is intense in this subject and it will be continuing as well.

Thank you all. This hearing is adjourned.

[Whereupon, at 2:15 p.m., the subcommittee was adjourned.]

[Material submitted for inclusion in the record follows:]

STATEMENT OF HON. MARY BONO

Good morning Chairman Markey, Ranking Member Stearns and welcome distinguished panel.

Over the last few months, the FCC conducted the congressionally-mandated and long-awaited 700 MHz auction, offering coveted spectrum intended to bring consumers advanced wireless services and wireless broadband.

It appears that to the extent the Commission followed market-based auction policies, the auction was a success. On the other hand, the auction also showed that when the government's regulatory hand gets too heavy, problems and unintended consequences are likely. For instance, the lack of a winning bidder for the D-Block was a major disappointment. This commercial spectrum was reserved in order to have a joint spectrum sharing agreement with our nation's first responders and the private sector. This block, did not receive the necessary minimum bid of $1.3 billion.

Last June, I wrote a letter to Chairman Martin citing my support for bringing broadband capability to our nation's responders, specifically in the 24 MHz that Congress had allocated to public safety in the 1997 Balanced Budget Act and for which this Committee, under the leadership of Ranking Member Barton, established a transitional "hard date" in the DTV and Public Safety Act of 2005. I strongly support that effort and believe that our nation's first responders need to have access to the latest technology.

Today, I remain concerned about auction rules that have onerous service conditions and I am glad our witnesses are here today to discuss these issues.

In the past, disregarding congressional intent for market-driven auction policy has resulted in spectrum laying fallow for years, litigation, and consumers being denied the benefits of wireless innovations. The FCC should stay away from devising encumbering rules which suppress interest in the spectrum auctions and recommit itself to the reason we are all here—which is not to play politics, but to improve public safety communications.

Lastly, I want to express my concern about another matter where it appears the Commission may be on the wrong path. In addition to re-auctioning the D block, I think the highest priority for the FCC should be a successful transition to digital television. I don't see how the FCC can hope to be an effective proponent of the digital television transition if it gets side-tracked by contentious policy debates, such as proposed government mandates on wholesale a la carte and price controls on television programming. I urge the FCC to stay focused on the important task at hand to ensure their success.

Thank you Mr. Chairman. I yield back my time.

STATEMENT OF HON. ELIOT ENGEL

Chairman Markey, Ranking Member Stearns—

Thank you for holding this important hearing today. The 700 MHz auction offers us a number of exciting opportunities. We will be able to stream video, browse the Web, and videoconference on our mobile phones, at speeds far above what we can do today. These technologies will be offered to people not just in large metropolitan cities, but even in rural areas not currently served by mobile broadband.

The second opportunity involves public safety and security. After we free up 700 MHz spectrum from the digital TV transition, we will have the opportunity to create a national, interoperable communications network for first responders. After the 9/11 attacks, it became extremely clear that the lack of interoperable communications was a major impediment to the safety of our police, firefighters and rescue workers.

When the DTV transition freed up spectrum for use, many of us have been excited about the potential uses of newer and more advanced forms of mobile communications. However, the spectrum auction did not go entirely as planned. Although the auction garnered far more money than we expected, the D block of spectrum failed to receive bids that were even one-third of the reserve price. This hearing will be a good opportunity to figure out why that happened, and how we can prevent it from happening in the future.

It was my hope that we would see new entrants into the national wireless industry. Unfortunately, we did not see a new national player emerge to compete with the top players in the market. However, I was glad to see that a company other than a nationwide incumbent carrier won a license in every local market across the country. In addition, 55 percent of the winning bidders were classified as a small business. This was a very positive development. I appreciate seeing new entrants come into the mobile market. As we all know, competition can spur greater innovation at better prices for consumers.

I am glad to see that all five FCC commissioners are here, and I especially thank Chairman Martin for taking the time to attend this hearing today. I look forward to hearing your take on this auction, as well as that of all the other commissioners.

I am also interested to hearing what the private sector has to say. They were the companies that were placing these multi-billion dollar bids, and I want to hear why there was such heavy bidding on some blocks but very little on others.

I am also very glad to see that Deputy Chief Charles Dowd is here, coming from my hometown of New York City. As the commanding officer of the division of the NYPD that will be responsible for implementing interoperable communications, he is in a unique position to inform us about the public safety side of the D block. Specifically, I hope to hear his suggestions for how this auction can be improved, and what he hopes to accomplish with the auction.

As many people on this committee know, I have long been a fighter for interoperable communications for our first responders. If our police can't talk to our firefighters, and if our EMTs can't talk to other rescue workers, it greatly hampers their ability to conduct an effective operation. As a result, lives can be lost, and they have been lost. I don't want to see that happen again.

This auction provided some great successes in some areas, and also created some areas that need work. Chairman Markey, I thank you for holding this hearing today so we can discuss those areas that need work, and how we can improve them. We have two excellent panels today, and I look forward to hearing what everybody has to say. I yield back the balance of my time.

STATEMENT OF HON. GENE GREEN

Mr. Chairman, thank you for holding this hearing on the 700 MHz spectrum auction. It is important we look at the successes and short-comings, especially in the public safety block, and I look forward to the testimony from our witnesses.

The failure of meeting the reserve price on the D-block is particularly concerning. The creation of a nationwide, interoperable broadband network for public safety was the most important aspect of clearing this spectrum and holding the auction.

The advanced services and choices for consumers which may come from the other blocks of spectrum auctioned are secondary to the importance of providing our public safety officials and first responders with a nationwide, interoperable network.

There is no question, the D-block provides the most workable solution to our nation's interoperable communications problem. In addition to establishing a nationwide standard, the spectrum has unique qualities that allow it to penetrate walls, smoke, and obstructions that other spectrum cannot, ensuring our first-responders can communicate under the most extreme conditions.

I think going forward, it will be beneficial for both public safety and companies interested in bidding on the spectrum and entering the public private partnership to know what is required of the partnership and the network. It appears the post-auction negotiations that were required on the D-block provided too much uncertainty for companies to make that commitment.

A workable option could be to allow each company interested in working with public safety to develop the public-private partnership to submit proposals and allow the Public Safety Spectrum Trust to review the proposals, make suggestions, and ultimately decide which proposal best fits public safety's needs.

This would allow public safety the opportunity to evaluate proposals and make suggestions, and provide companies with more certainty on what is required of them prior to making the huge capital investment required by purchasing the D-block. I believe it is in public safety's interest to allow any party interested in the public-private partnership to submit a proposal, and no company should be prevented from submitting a proposal, or eventually bidding on the spectrum.

Outside of the D-block, the auction was a success when we look at the amount of money raised, but we should learn from several shortcomings in this auction. It is clear from the price paid per MHz POP in the auction that encumbering licensees with conditions on spectrum licenses dramatically decreases the value of that spectrum.

Whether these conditions result in new and advanced technologies for consumers will be determined in the years to come.

What is certain is that companies that had no plans to actually participate in the auction or invest in wireless infrastructure, but simply wanted to manipulate the rules on the C-block to their benefit were able to do just that.

We have had over half a dozen hearings on broadband deployment and the future of the internet in this hearing. Nearly everyone on this subcommittee has agreed that a wireless, third pipe will bring competition to the marketplace, benefit consumers, and expand the range and quality of services available in today's marketplace.

The C-block is a prime block of spectrum to create that third pipe, given the size of the licenses and the quality of the spectrum, however, rather than allowing companies to bid on that spectrum unencumbered to develop a network and deliver wireless broadband in the most efficient manner, conditions were placed on it, making it unattractive to all but a few bidders.

Spectrum auctions are not just about raising money—they should promote competition, consumer choice, and introduction of innovative and new technologies. However, I think the results of the C-block demonstrate that placing conditions on spectrum does not accomplish any of these goals. The conditions on the C-block limited interest in the spectrum, which both drove down revenue, and prevented possibly new and innovative companies from bidding on that block.

Again, I thank today's witnesses for their testimony, and I thank the Chairman for holding the hearing. I look forward to working with this Subcommittee and the Commission as we move forward on re-auctioning the D-block.

The Brattle Group

Cambridge
Washington
London
San Francisco

May 18, 2005

Honorable Joe Barton
Chairman
Committee on Energy and Commerce
U.S. House of Representatives
Washington, DC 20515

Honorable John D. Dingell
Ranking Member
Committee on Energy and Commerce
U.S. House of Representatives
Washington, DC 20515

Honorable Fred Upton
Chairman
Subcommittee on Telecommunications and the Internet
Committee on Energy and Commerce
U.S. House of Representatives
Washington, DC 20515

Honorable Edward J. Markey
Ranking Member
Subcommittee on Telecommunications and the Internet
Committee on Energy and Commerce
U.S. House of Representatives
Washington, DC 20515

Dear Messrs. Barton, Dingell, Upton and Markey:

The Committee on Energy and Commerce is investigating ways to free up a potentially productive block of spectrum in the 700 MHz band that is now used to provide traditional broadcast television. To help inform the Committee's analysis, QUALCOMM Incorporated recently asked *The Brattle Group* to estimate how much revenue the U.S. Treasury would receive if the Federal Communications Commission (FCC) auctioned licenses for the remaining 60 MHz of spectrum in this band, which the FCC has allocated for commercial use.[1]

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[1] The focus of attention has been on channels 52-69 in the 700 MHz band, which occupy 108 MHz of spectrum. Of that, 48 MHz are not available for auction (6 MHz comprise guard bands, 24 MHz have been designated for public safety, and 18 MHz have been licensed in previous auctions). The remaining 60 MHz, which are the focus of this letter, consist of Blocks C and D in the Upper 700 MHz Bandplan, and Blocks A, B and E in the Lower 700 MHz Bandplan. For bandplan displays, see:

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SUMMARY

We use a market comparables approach to calculate the value of licenses in the 700 MHz band because there is a well-established market for equivalent assets. Specifically, we look at sales of broadband personal communications services (PCS) licenses, which use the 1.9 GHz band. The two major sales of broadband PCS licenses that have occurred this year, taken together, yielded a price of $1.60 per MHz-pop.[2] This is consistent with the FCC's 2004 estimate, itself based on market comparables, that 10 MHz of nationwide 1.9 GHz spectrum was worth $1.70 per MHz-pop. Thus, we take the simple average of these two figures ($1.65 per MHz-pop) as our base estimate of the value of nationwide spectrum in the 700 MHz band.

We then analyze two main arguments for adjusting that base estimate. Most important, we consider whether a potentially large increase in the supply of broadband spectrum will significantly reduce its price, as some people argue. We conclude that the prices paid for broadband PCS licenses in 2005 reflect the market's expectation that a significant increase in supply is imminent. Thus, there is no reason to believe that the FCC's planned auction of 90 MHz of 3G spectrum will cause the price of spectrum to drop significantly. There is greater market uncertainty regarding the 700 MHz spectrum, however, so price may drop somewhat if and when that spectrum becomes available for auction.

We also look at the technical features of the 700 MHz band (propagation characteristics and power limits) that make it superior to the 1.9 GHz band for providing broadband wireless services. Most important, these technical advantages allow for significantly lower infrastructure costs; the savings to a licensee building a nationwide network could be worth as much as $0.43 per MHz-pop. All else being equal, some bidders would be willing to pay $0.43 per MHz-pop more for 700 MHz spectrum than for 1.9 GHz spectrum to capture these savings.

In sum, our base estimate should be adjusted upward to reflect the superior technical features of the 700 MHz band, but some downward adjustment is also appropriate to take account of the impact of increased supply that the market has not yet anticipated. Since we do not have a rigorous basis for quantifying either factor, we refrain from making any adjustment, in effect, treating the two factors as canceling one another out. Thus, we conclude that *our base estimate remains our best estimate: an FCC auction of licenses for 60 MHz of 700 MHz spectrum will yield $1.65 per MHz-pop, or about $28 billion, assuming that the spectrum is unencumbered.*

Our estimate represents only the auction revenue (*i.e.,* Treasury receipts) that this 60 MHz of spectrum would generate if it were freed from current restrictions. Lifting the restrictions on this spectrum would also generate significant consumer benefits in the form of new services and lower prices, and these consumer benefits likely would exceed the auction receipts in value by a significant amount.

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http://wireless.fcc.gov/auctions/data/bandplans/700band.pdf; and http://wireless.fcc.gov/auctions/data/bandplans/700lower.pdf.

[2] We express the revenue generated by a license auction or a secondary trade as the price paid per MHz of spectrum divided by the population (pop) covered by the licenses (price per MHz-pop).

I. VALUATION APPROACH

Economists use two basic techniques to estimate the value of spectrum licenses. The *income approach* is based on the assumption that the value of a spectrum license is equal to the expected future benefits (income) to the license holder discounted at a rate that reflects the time value of money and the risk involved. The *market comparable (or market) approach*, which has its roots in real estate, observes the prices paid for equivalent licenses in the market. The two approaches should yield similar results because the prices paid for comparable licenses reflect the present value of the future income stream that ownership of the license being valued would provide.

We use the market comparable approach to estimate the value of licenses in the 700 MHz band, because there is a well-established market for equivalent assets on which to base our analysis.[3] As described below, we look at sales of broadband PCS licenses in both the *primary* market (*i.e.*, auctions) and the *secondary* market over the last decade. The prices paid in several recent transactions give us a base estimate of the value of 700 MHz licenses. We then analyze three possible rationales for adjusting this estimate: technical advantages of the 700 MHz band; the growing supply of spectrum; and the potential for the 700 MHz licenses to be encumbered.

II. BASE ESTIMATE

A. Review of 1.9 GHz Transactions

1. Auctions

Since Congress authorized their use in 1993, the FCC has held 60 auctions of spectrum licenses, for applications ranging from direct broadcast satellite to paging to personal communications services (PCS). PCS systems, which were licensed originally to provide competition for cellular telephony, encompass a wide range of mobile wireless technologies for voice and data communications. Broadband PCS licenses, which use a 120-MHz portion of the 1.9 GHz band, have been assigned entirely through auction. Spectrum experts agree that, although the 700 MHz band has technical and cost advantages relative to the 1.9 GHz band, broadband PCS licenses offer a very good basis for estimating what 700 MHz licenses would be worth.

The FCC has held five major auctions of broadband PCS licenses, as summarized in Table 1. The broadband PCS spectrum was divided into three blocks of 30 MHz each (A, B and C) and three blocks of 10 MHz each (D, E and F).[4] Auctions 4, 5 and 11, which were held between 1995 and 1997, assigned all 120 MHz of this new spectrum. The two most recent auctions (35 and 58) reassigned licenses that had been cancelled or terminated—most as part of the NextWave bankruptcy. The results of the auctions were wide-ranging: the price per MHz-pop varied from a low of $0.33 (Auction 11) to a high of $4.18 (Auction 35). Moreover, individual auctions included hundreds of licenses; thus, the (weighted average) prices shown in Table 1 mask significant price differences *within* auctions.

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[3] The income approach is widely used by bidders to help determine the appropriate bid. However, in this case, it would require an analyst to estimate would-be licensees' costs and revenues, and the results would highly sensitive to key assumptions, such as the cost of capital. By contrast, the comparable approach is direct and transparent.

[4] Blocks A and B were initially assigned on the basis of 51 Major Trading Areas (MTAs). Blocks C, D, E and F were assigned on the basis of 493 Basic Trading Areas (BTAs).

Table 1
FCC Broadband PCS Auctions

Transaction	Block	Date	Spectrum	Geographic Service Area	Price / MHz-Pop
Auction 4	A & B	1995	1.9 GHz	National	$0.51
Auction 5	C	1996	1.9 GHz	National	$1.35
Auction 11	D,E & F	1997	1.9 GHz	National	$0.33
Auction 35	C & F	2001	1.9 GHz	National	$4.18
Auction 58	C, with A, D, E & F	2005	1.9 GHz	Regional	$0.98

Much has been written about the FCC's PCS auctions. Although there is no definitive explanation for the price differences, analysts point to at least four factors. Market conditions are one reason for price differences. Prices in Auction 5 (C block) were significantly higher than prices in Auction 4 (A & B blocks), in part because the intervening year saw major improvements in wireless communications technology and continued strong growth in consumer demand for wireless telephony.[5] In Auction 35, which occurred during a period of lofty investor expectations, bidders paid higher prices still for licenses; European carriers also bid unusually high prices for third-generation cellular licenses at around the same time.

Auction rules are another reason that prices differ. The FCC restricted participation in Auction 4 by existing cellular licensees in an effort to encourage new entry into the telecommunications market. The conscious tradeoff was that fewer bidders participated, which kept bids artificially low. In Auction 5, FCC rules—specifically, overly generous financing terms designed to encourage small business participation—had the opposite effect, attracting a large number of bidders and artificially inflating bids. According to the Congressional Budget Office (CBO), absent these incentives, Auction 5 would have yielded $0.80 rather than $1.35 per MHz-pop.

A third factor is the level of competition in the auction. As indicated above, the yield in Auctions 4 and 5 was directly related to the number of bidders, which in turn was influenced by FCC rules. Similarly, in Auction 11, the low yield ($0.33) was consistent with the small number of bidders (the eligibility ratio—a crude measure of the level of bidder competition—was only 1.7, compared to 6.7 for Auction 5 and 1.9 for Auction 4). This low participation rate was a reaction to the speculative bidding in Auction 5 and reflected a temporary dip in the telecommunications market—two factors that contributed to the subsequent bankruptcy of NextWave and the other C-block licensees.

Finally, characteristics of the licenses themselves help explain price differences. One important characteristic is the geographic scope of spectrum coverage. The first four auctions assigned licenses for every market in the country—in effect providing valuable nationwide spectrum rights. By contrast, Auction 58 consisted of a miscellaneous assortment of licenses, most of them in second and third tier markets, and did not provide the opportunity for nationwide coverage. The size of the spectrum block is another relevant characteristic. All else being equal, licenses in the 30-MHz blocks (A, B and C) are more valuable per MHz-pop than those in the 10-MHz blocks (D, E and F) because the larger blocks give licensees greater flexibility.

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[5] Congressional Budget Office, *Where Do We Go From Here? The FCC Auctions and the Future of Radio Spectrum.Management* (April 1997), at 19-22. Unless other indicated, the information in this section comes from this report.

2. *Secondary Market Transactions*

Broadband PCS licenses have traded in the secondary market as well. Table 2 summarizes eight relatively recent secondary market trades. The list is not exhaustive. Rather, it consists of seven transactions that the FCC examined in 2004 as part of an unusual valuation exercise described below. Table 2 also includes a 2005 transaction in which Verizon Wireless purchased NextWave's PCS licenses in 23 largely metropolitan markets.

Table 2
Secondary Market Sales of Broadband PCS (1.9 GHz) Licenses

Transaction	Date	Seller	Buyer	Price / MHz-Pop
50 Licenses	2002	Northcoast	Verizon	$1.58
Spectrum in 34 Cities	2003	NextWave	Cingular	$1.66
62 Spectrum Licenses in 57 Areas	2004	Qwest	Verizon	$1.36
10 MHz, 3 BTAs (San Francisco-Oakland-San Jose, Sacramento, Las Vegas)	2004	Cingular	T-Mobile	$1.67
10 MHz New York BTA	2004	NextWave	Verizon	$4.74
10 MHz Sarasota-Bradenton BTA	2004	NextWave	MetroPCS	$1.37
10 MHz Tampa-St. Petersburg-Clearwater BTA	2004	NextWave	MetroPCS	$1.33
19 10MHz and 4 20MHz Licenses in 23 BTAs	2005	NextWave	Verizon	$2.80

These secondary market transactions reflect far less variation in price than the broadband PCS auctions, largely because the FCC selected them (or at least the first seven) as representative of the value of nationwide spectrum in the 1.9 MHz band. The two outliers are the 2004 and 2005 sales of NextWave licenses to Verizon, which yielded $4.74 and $2.80 per MHz-pop, respectively. These licenses commanded higher prices because they serve New York City and other large metropolitan markets. Such markets typically bring higher prices per MHz-pop because they are more densely populated, and thus less expensive to serve, and more affluent.

B. Selection of Comparable Transactions

1. *FCC's Point Estimate*

In a 2004 Report and Order, the FCC concluded that 10 MHz of nationwide spectrum in the 1.9 GHz band was worth $1.70 per MHz-pop.[6] This unusual finding (the FCC does not put a value on spectrum as a rule) was part of a complex regulatory proceeding that involved a dispute between Nextel Communications and Verizon Wireless over the value of that spectrum. The FCC analyzed competing valuations provided by experts for the two companies. These valuations, which ranged from $1.25 to $1.82 per MHz-pop, used both income and market approaches. However, the FCC ultimately based its estimate solely on market comparables.

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[6] In the Matter of Improving Public Safety Communications in the 800 MHz Band, FCC, "Report and Order, Fifth Report and Order, Fourth Memorandum Opinion and Order, and Order" (August 6, 2004).

Specifically, after reviewing the seven pre-2005 transactions summarized in Table 2, the FCC identified the first two (Northcoast-Verizon and NextWave-Cingular) as its benchmarks and calculated the average of the two prices ($1.62 per MHz-pop). The Commission then added a five percent premium to reflect the fact that the disputed spectrum (unlike the benchmark spectrum) would provide nationwide coverage. (The FCC limited the premium to five percent on the grounds that several carriers already had national footprints and thus would not be willing to pay as much for nationwide spectrum.) *The FCC's point estimate ($1.70 per MHz-pop) is a solid indication of what nationwide licenses in the 1.9 GHz band were worth last year, and it represents one comparable on which we base our valuation of licenses in the 700 MHz band.*

2. 2005 Transactions

As reported in Tables 1 and 2, two major sales of 1.9 GHz licenses have occurred this year, both involving the resale of NextWave assets:

- Auction 58, in which NextWave licenses that serve about 100 million people in mostly second tier markets sold for $2 billion, or $0.98 per MHz-pop.
- Verizon's purchase for $3 billion, or $2.80 per MHz-pop, of NextWave licenses covering 73 million people in more than 20 major markets.

Neither of these transactions, taken alone, represents a good market comparable. As reflected in their price, Auction 58 licenses cover markets that are lower in density (and therefore more expensive to serve on a per customer basis) and less affluent. By contrast, the private transaction covered a number of high-density, relatively affluent markets, including New York, Boston, Washington, DC, and Los Angeles. Collectively, however, the licenses cover more than 60 percent of the U.S. population. Moreover, taken together, these two transactions produced prices that are roughly equivalent to a nationwide average.[7] Using a weighted-average, *the combined price of spectrum licenses sold in Auction 58 and the 2005 NextWave-Verizon Wireless transaction is $1.60 per MHz-pop. This weighted-average price represents a second market comparable on which to base our valuation of licenses in the 700 MHz band.*

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[7] To compare these two transactions to a nationwide auction, we did the following analysis. For each of three nationwide FCC auctions (Auctions 5, 11 and 35), we calculated the price of licenses in the subset of markets (basic trading areas, or BTAs) which were included in *either* Auction 58 *or* the 2005 Verizon-NextWave transaction. For each of those three auctions, we then compared the average price of licenses in the specified subset of BTAs to the (nationwide) average price for *all* licenses. For Auction 5, licenses in the specified subset of BTAs sold for $1.45 per MHz-pop compared to $1.35 per MHz-pop for all licenses. For Auction 35, the two prices were even more similar: $4.26 per MH-pop for the subset of licenses versus $4.18 per MHz-pop for all licenses. For Auction 11, by contrast, the subset price ($0.25 per MHz-pop) was unexpectedly low relative to the nationwide price ($0.33 per MHz-pop); however, a number of second and third tier markets in that auction produced higher bids than first tier markets, an atypical pattern that seems to account for that unexpected result. Overall, we concluded that the two 2005 transactions, taken together, produced prices equivalent to those of a nationwide auction.

C. Recap and Conversion of Our Base Estimate to Aggregate Revenue

To recap, the two major sales of 1.9 GHz licenses that have occurred this year, taken together, yielded a price of $1.60 per MHz-pop, which is remarkably consistent with the FCC's 2004 estimate that 10 MHz of nationwide 1.9 GHz spectrum was worth $1.70 per MHz-pop. Thus, *we take the simple average of these two figures—$1.65 per MHz-pop—as our base estimate of the value of the rights (licenses) to nationwide spectrum in the 700 MHz band.* Converting that to aggregate revenue, we estimate that an FCC auction of licenses to 60 MHz of such spectrum would generate about $28 billion.[8] If any portion of that spectrum were to be set aside for unlicensed use, and therefore made ineligible for auction, our estimate would need to be reduced proportionately.[9]

III. ANALYSIS OF POSSIBLE ADJUSTMENTS TO OUR BASE ESTIMATE

Our base estimate ($1.65 per MHz-pop) is a solid measure of the value of nationwide licenses for broadband PCS spectrum in the current market—namely, a highly competitive, spectrum-constrained market served by five national wireless carriers, most of whom nevertheless have acquired sufficient bandwidth to give them something approaching a nationwide footprint.[10] It reflects the expected future profits from broadband PCS license ownership, based on information available at the time of the transactions regarding market conditions (demand trends, supply expectations, number of competitors, *etc.*), technology, and other factors. However, there are three possible arguments for adjusting our base estimate as a measure of the value of 700 MHz licenses. First, an upward adjustment may be appropriate to take account of technical advantages of the 700 MHz band relative to the 1.9 GHz band. Second, changing market conditions—in particular, the potential for a large increase in the supply of spectrum—may require a downward adjustment in our base estimate. Finally, the possibility that the 700 MHz spectrum will be encumbered (*i.e.*, not cleared of the broadcasters) may require a downward adjustment.

A. Technical and Cost Advantages of the 700 MHz Band

The 700 MHz band has technical features that make it particularly well-suited to providing broadband wireless services. The fundamental laws of physics dictate that lower frequencies travel further at a given power level. Thus, providers need fewer antennas and less power to deliver services to a given area. Moreover, because TV frequencies can better penetrate walls, signals are not as dependent on line-of-sight transmission to outdoor antennas. Finally, under FCC regulations, the power limits for the lower 700 MHz band are substantially higher than for other broadband wireless spectrum, including the 1.9 GHz band.

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[8] This simple exercise involves multiplying the price per MHz-pop by the bandwidth that would be licensed (60 MHz) and by the size of the relevant population—in this case, total U.S. population. To be consistent with the FCC's 2004 valuation of the 1.9 GHz spectrum, we use the total year 2000 population for the United States including possessions, or 285.62 million. Actual calculations are: ($1.65 x 60 x 285,620,000) = $28.3 billion.

[9] For a recent economic analysis of the debate over unlicensed spectrum, see William J. Baumol, "Toward an Evolutionary Regime for Spectrum Governance: Licensing or Unrestricted Entry?," Working Paper, AEI-Brookings Joint Center for Regulatory Studies (April 2005). http://www.aei.brookings.org/admin/authorpdfs/page.php?id=1137.

[10] The five national wireless carriers are: Cingular-AT&T, Nextel, Sprint, T-Mobile and Verizon Wireless. Sprint and Nextel have announced plans to merge, which if approved would leave four national carriers. Approval of the merger would not alter our analysis.

These advantages are meaningful: a signal transmitting at 700 MHz covers roughly twice the area as one transmitting at 1.9 GHz, and thus needs only about half as many base stations.[11] According to Charles Townsend, the Managing General Partner of Aloha Partners, which is the largest 700 MHz licensee, the costs of building a nationwide network are directly proportional to the number of base stations: a 700 MHz nationwide network would cost about $3.6 billion compared to $6.8 billion for a 1.9 GHz network.[12] Moreover, with fewer base stations, a licensee's operating costs would be lower. Two caveats are in order: First, the savings would be less, although still significant, for an existing carrier that already has a nationwide network. Second, as network traffic grows, and an operator begins to split its cell sites, the advantage that comes from using the 700 MHz band will diminish. But, according to Townsend, the "crossover" point is three to eight years out in most markets.[13]

The propagation characteristics of the 700 MHz band are particularly advantageous for certain applications. For example, QUALCOMM bought encumbered spectrum in the lower 700 MHz band to launch its MediaFLO service, which will deliver multimedia content to wireless devices on a dedicated network. QUALCOMM will be able to provide this multicast application with just a fraction of the towers it would need if it were operating in a higher-frequency band.[14] Similarly, the relative ease with which 700 MHz signals can penetrate walls may enable more cost-effective provision of broadband wireless services to equipment used primarily indoors.[15]

In short, because of the superior technical features of the 700 MHz band, licensees will be able to provide the same service at lower costs (or higher quality), and some services may be feasible and/or cost-effective at the lower band but not at the higher band. All else being equal, bidders will pay more for a 700 MHz license to capture this economic advantage.

The Aloha Partners figures cited above give some indication of what this advantage is worth. Based on Townsend's estimates, the difference in the cost of building a (new) nationwide network for 700 MHz spectrum versus 1.9 GHz spectrum is about $3.2 billion ($6.8 billion versus $3.6 billion).[16] Assuming that a nationwide operation requires 20 MHz of spectrum, that figure translates into a per-MHz-pop cost savings of about $0.43—a substantial number.

All other things being equal, some if not all bidders would be willing to pay $0.43 per MHz-pop more for 700 MHz spectrum than for 1.9 GHz spectrum in order to capture those savings. Thus, one could adjust our base estimate ($1.65 per MHz-pop) upward by as much as that amount to take account of the technical advantages of the 700 MHz band. However, we stop short of making any formal adjustment to our estimate, because we have not done a comprehensive or rigorous analysis of potential cost savings or an income analysis of potential bidders.

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[11] The 700 MHz spectrum offers a four-to-one advantage over the 2.5 GHz band, which is the current spectrum for WiFi and multichannel multipoint distribution services (MMDS). Chris Knudsen of Vulcan Capital estimated that it would require only one-third to one-fourth as many cell cites to provide wireless broadband service to the Seattle area using 700 MHz spectrum as opposed to the 2.6 GHz band. Similarly, an analysis by Intel found that the 2.5 GHz band would require four to five times as many base stations as the 700 MHz band to achieve equal coverage. Patrick P. Gelsinger, Chief Technology Officer, Intel Corporation, Testimony before the Senate Committee on Commerce, Science and Transportation (June 9, 2004).

[12] Letter from Townsend to Members of the House Committee on Energy and Commerce (April 27, 2005).

[13] Telephone conversation with Charles Townsend (May 11, 2004).

[14] QUALCOMM Incorporated, "QUALCOMM Subsidiary to Support Nationwide Delivery of Mobile Multimedia in 700 MHz Spectrum," Press Release (November 1, 2004).

[15] Testimony of Patrick P. Gelsinger, Intel Corporation, *op cit.*

[16] We calculated that number as follows: A $3.2 billion savings on a nationwide network represents a cost savings of about $10 per pop, where total pop, or U.S. population, is about 300 million. Assuming that a nationwide operation will require 20 MHz of spectrum, that savings equals $0.50 per MHz-pop—or about $0.43 in present discounted dollars. To get $0.43, we spread the savings over five years and applied a 10 percent discount rate.

B. The Growing Supply of Spectrum

The U.S. devotes only about 190 MHz of spectrum to fixed and mobile wireless communications services, and that figure has not grown since the mid-1990s. By contrast, European countries allocate 250-300 MHz on average for the same activities, and the figure is even higher in Germany (302 MHz), the Netherlands (355 MHz) and the United Kingdom (340 MHz).[17] Even among experts who disagree on telecommunications policy, there is general agreement that the United States is spectrum-starved.[18]

In response to widespread criticism from industry and elsewhere, officials in the Executive Branch and the Congress have tried to address this spectrum drought in two ways. These efforts should soon provide some relief.

One effort has focused on 90 MHz of spectrum in the 1.7 GHz and 2.1 GHz bands that may be used for advanced wireless services, including third-generation (3G) services. (Among other things, these bands correspond to the spectrum already used for 3G in many parts of the world.) Then-Chairman Michael Powell announced in December 2004 that the FCC planned to commence the auction of licenses in that spectrum as early as June 2006.[19] Powell's announcement marked the culmination of a four-year process, initiated by the Clinton Administration, through which government and industry examined spectrum needs and identified frequency bands that could be cleared to allow for the provision of 3G services. As a last step in that process (and just days before Powell's announcement), Congress finally enacted the Commercial Spectrum Enhancement Act. This legislation, which was approved a year earlier by the full House and the Senate Commerce Committee, provided for the use of auction revenues to compensate the Department of Defense and other federal agencies for the costs of clearing those bands—thus removing the final barrier to an FCC auction of this spectrum.[20]

The second, ongoing effort involves the 60 MHz of spectrum in the 700 MHz band that is the focus of this letter. In the past, efforts to reallocate this spectrum to general wireless use, in keeping with FCC bandplans, have lacked enough support in Congress to overcome broadcaster opposition. However, the tide has been gradually turning, in response to mounting criticism from industry, think tanks and the media, among other sources. A year ago, House Energy and

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[17] Testimony of Thomas W. Hazlett before the Senate Committee on Commerce, Science and Transportation (June 9, 2004).

[18] At a recent conference, panelists with alternative views on U.S. telecom policy expressed a strikingly common view as to the urgent need for spectrum. According to one of the experts, Thomas Hazlett, the shortage of spectrum has even driven consolidation in the wireless industry. AEI-Brookings Joint Center for Regulatory Studies and Stanford Institute for Economic Policy Research, "The Future of Telecom Deregulation: Two Alternate Visions," Washington, DC (March 24, 2005).

[19] FCC Press Release, "FCC to Commence Spectrum Auction That Will Provide American Consumers New Wireless Broadband Services" (December 29, 2004).

[20] The Act required the FCC to give the National Telecommunications and Information Administration (NTIA) 18 months notice of its intent to auction the 3G spectrum. Less than a week after President Bush signed the Act (and with the Christmas holiday having intervened), Chairman Powell sent a letter to NTIA providing the minimum notice. Letter from FCC Chairman Michael K. Powell to the Honorable Michael D. Gallagher, Assistant Secretary for Communications and Information, Department of Commerce (December 29, 2004).

Commerce Committee Chairman Joe Barton endorsed a plan that would force TV stations to return their analog spectrum to the federal government by the end of 2006, and Rep. Barton's intent to move legislation toward that goal has been widely publicized for months. Although impediments remain, and key Senate officials are seen as less enthusiastic, there has been a growing perception that the Congress is likely to enact legislation this year to clear the 700 MHz spectrum by a date certain.

Some observers, in considering the financial implications of these developments, have suggested that the pending auction of licenses to 3G spectrum will reduce what bidders are willing to pay for broadband licenses, including 700 MHz licenses. By this view, once the 3G spectrum reaches the market, an auction of 700 MHz licenses will yield prices significantly below those recently paid for broadband PCS spectrum. However, this seemingly logical observation about supply and demand becomes problematic on closer inspection.

In analyzing the impact of an increase (or decrease) in supply on the price of an asset, the triggering event is not the increase (or decrease) itself but rather the market's recognition that it is going to occur. Thus, to the extent that the pending increase in the supply of broadband spectrum was expected, the market should have factored it into recent spectrum transactions. As noted above, the FCC announced its intent to auction 90 MHz of 3G spectrum in December 2004, following a well-publicized, multi-year process that slowly but steadily removed the political and legal impediments to such a transaction. Although some uncertainty as to timing remains, the FCC's intent to begin auctioning the 3G spectrum at the earliest possible date has been known since late last year, and was anticipated to some degree long before that.

In sum, the prices paid for broadband PCS licenses in the two 2005 transactions that we observed, if not the earlier transactions, reflect the market's expectation that a significant increase in supply is imminent. Thus, there is no reason to believe that the increase in supply resulting from the 3G auction will cause the price of spectrum to drop significantly.

Similarly, to the extent that the market has already anticipated the increase in supply represented by the 700 MHz spectrum, that increase in available spectrum will not affect the price of broadband licenses. That said, considerable market uncertainty remains, in particular, as to the likely date by which broadcasters will be required to clear the band under final legislation. If and when legislation passes, and the 700 MHz spectrum is auctioned, that uncertainty will dissolve, and the price of spectrum may fall.

In sum, because markets are generally efficient, current spectrum prices reflect the best available information regarding the potential impact of future changes in supply, demand and other factors. By relying on recent market transactions, a comparable methodology takes advantage of this vast base of decentralized knowledge. Thus, the fact that 90 MHz of 3G spectrum will come on the market in the next few years is not a credible argument for adjusting our base estimate downward, precisely because recent broadband PCS license sales should have already taken that future development into account. For the same reason, Wall Street's projection that the demand for wireless data and voice services will see continued strong growth is not a basis for adjusting our estimate upward: recent transactions already reflect that expectation.

Because there is greater market uncertainty with respect to the 60 MHz of 700 MHz spectrum, it may be appropriate to adjust our base estimate downward to reflect the potential impact of that added supply. But recent transactions should have taken even that into account somewhat because of the gradual, tide-turning developments described above—in particular, Chairman Barton's well-publicized intent to free up the spectrum, which he signaled nearly a year ago.

C. The Potential for Encumbrance

The comparable transactions on which we based our estimate involved spectrum that either was unencumbered or was covered by clear rules that provided for the removal of any encumbrance (*i.e.*, other spectrum activities that might create interference). Thus, if any of the 700 MHz spectrum were to be encumbered, our base estimate would need to be adjusted downward. Moreover, the downward adjustment would need to be significant. Table 3 summarizes the results of two relatively recent FCC auctions of encumbered licenses in the 700 MHz band. Although the spectrum assigned in these two auctions is considered to be the best of beachfront property, licensees cannot use the spectrum to its full extent unless it is vacated by the current license holders, namely the broadcasters. As a result of this limitation, the licenses sold for only three cents per MHz-pop—a small fraction of the price that comparable, unencumbered licenses commanded in the transactions shown in Tables 1 and 2.

Table 3
FCC Auctions of Encumbered 700 MHz Spectrum

Transaction	Date	Spectrum	Price / MHz-Pop
Auction 44 (Lower 700 MHz Band)	2002	700 MHz	$0.03
Auction 49 (Lower 700 MHz Band)	2003	700 MHz	$0.03

We have no basis for predicting the probability that any or all of the 60 MHz of 700 MHz spectrum will be encumbered. Thus, we will not adjust our base estimate to reflect that probability. Instead, we will make our estimate conditional on the assumption that the spectrum will be unencumbered—*i.e.*, that it will be cleared of television broadcasters as of a date certain.

IV. FINAL ESTIMATE

In section two, we used market comparables to calculate as our base estimate that licenses to 60 MHz of 700 MHz spectrum would be worth $1.65 per MHz-pop, or about $28 billion. In the last section, we analyzed three possible arguments for adjusting that base estimate. We concluded that our estimate should be adjusted upward, potentially by a significant amount, to take account of the superior technical features of the 700 MHz band; at the same time, some downward adjustment is appropriate to take account of the potential impact of increased spectrum supply that the market has not yet anticipated. Since we do not have a basis for quantifying either factor, we refrain from making any adjustment, in effect, treating the two factors as canceling one another out. Thus, we conclude that *our base estimate remains our best estimate: an FCC auction of licenses to 60 MHz of 700 MHz spectrum will yield $1.65 per MHz-pop, or about $28 billion, assuming that the spectrum is unencumbered.* If any portion of this spectrum were to be set aside for unlicensed use, and therefore made ineligible for auction, our estimate would need to be reduced proportionately.

V. CONSUMER BENEFITS ARE ADDITIONAL—AND SIGNIFICANT

Our estimate represents only the auction revenue (*i.e.*, receipts to the U.S. Treasury) that 60 MHz of unencumbered spectrum in the 700 MHz band would generate. In addition, the market allocation of this choice spectrum would result in benefits to American consumers in the form of new broadband services and lower prices for existing services. Although a calculation of these consumer benefits is outside the scope of our work, it is safe to say that they would be significant. Two prominent telecommunications economists have estimated that the consumer surplus (a measure of benefits to consumers) associated with efficient use of spectrum could be an order of magnitude greater than the auction value of spectrum licenses.[21]

We appreciate the opportunity to provide this information to the Committee.

Sincerely,

William Zarakas
William P. Zarakas
Principal
The Brattle Group[*]

Dorothy Robyn
Dorothy Robyn
Principal
The Brattle Group

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[21] Gregory L. Rosston, "The Long and Winding Road: The FCC Paves the Path with Good Intentions," *Telecommunications Policy*, Vol. 27, No. 7 (August 2003), pages 501-515; and Thomas W. Hazlett, Coleman Bazelon, John Rutledge and Deborah Allen Hewitt, "Sending the Right Signals: Promoting Competition Through Telecommunications Reform," A Report to the Chamber of Commerce (September 22, 2004), page 69.

[*] *The Brattle Group* is an economic consulting firm that specializes in the application of quantitative methods in economics and corporate finance to the analysis of competition in network industries. William Zarakas heads *Brattle's* practice in telecommunications and Dorothy Robyn heads the firm's public policy practice.

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ONE HUNDRED TENTH CONGRESS

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June 29, 2007

The Honorable Kevin J. Martin
Chairman
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band; Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010 PS Docket No. 06-229, WT Docket No. 96-86 (*Ninth Notice of Proposed Rulemaking)*

Dear Chairman Martin:

We commend you for your consideration of the above-referenced rulemaking. We request that this letter be placed in the public comment file with respect to that proceeding. We believe that it is worth considering whether public-private partnerships can help First Responders use more efficiently the 24 MHz of spectrum that was cleared by the Digital Television Transition and Public Safety Act of 2005 and made available specifically for that purpose. Proposals like those of Frontline to jury-rig the 700 MHz auction, however, would force public safety officials to negotiate with one winner, of one auction, with one pre-determined business plan and no track record of success. In the end, it would harm both the broader auction and our public safety goals. We urge you to reject Frontline-type schemes and stick with your proposal in the Ninth Notice of Proposed Rulemaking to allow First Responders to negotiate with all comers outside the confines of an auction.

Public safety officials have expressed concern that Frontline does not adequately represent their interests, as evidenced in the recent filings of the National Public Safety Telecommunications Council, the Association of Public Safety Communications Officials, and others. State and local government representatives oppose the Frontline proposal for similar reasons in filings by the National Association of Telecommunications Officers and Advisors, the National Association of Counties, the U.S. Conference of Mayors, and the National League of Cities. The public safety and government officials note that little time has been available to scrutinize the 11th-hour proposal, which is short on specifics, leaving doubt whether the business plan and proposed network will really work. They also worry that the coverage, reliability, security, and quality of service will not meet public safety standards; that the network will not be available for years; and that First Responders will lack control.

Public safety officials are so skeptical, in fact, that they insist any spectrum set-aside for entities such as Frontline be granted on the condition that the licensee meet a series of public safety requirements or return the spectrum. The statement of requirements, however, will not be drafted until some time in the future. The odds of crafting precisely the right auction conditions, that create precisely the right model, and that result in precisely the right winner, who will then agree to public safety's requirements are minimal at best. We are likely to be left either with no bidder, or a winner who will neither meet the needs of public safety nor relinquish the license without a fight. Meanwhile, we would have wasted time, spoiled the auction, taken valuable spectrum out of circulation, and slowed progress toward our public safety goals. The history of spectrum policy has been marred by unfortunate incidents in which litigation delayed the allocation and use of spectrum.

Alarmingly, a number of Frontline's proposals do not even have anything to do with public safety. Suggestions to impose wholesale and so-called open access requirements, for example, are blatant poison pills to discourage competing bids and lower the price of the spectrum. An outright prohibition on participation by incumbents is similarly self-serving. Whether considered as part of the Frontline proposal or as stand-alone requirements, these restrictions are inappropriate. Business models should be left to the market, not hard-wired into auctions. Moreover, Congress overwhelmingly rejected network neutrality mandates last year in a bipartisan vote of 269 to 152 on the House floor. The Commission has also just launched proceedings which we believe will demonstrate that network neutrality and device unbundling mandates are not only unnecessary, but harmful. The National Public Safety Telecommunications Council and the Association of Public Safety Communications Officials have also expressed concerns that requiring open access would jeopardize the public safety network.

To avoid starting down a path that will be difficult, if not impossible, from which to recover, we suggest that the Commission follow the approach it outlined in the Ninth Notice of Proposed Rulemaking. There, the Commission proposed assigning half of the 24 MHz of spectrum to a public safety licensee that would have discretion to enter into public-private partnerships. This would allow more time to consider additional proposals, increase the likelihood that the network actually meets the needs of public safety, and give First Responders more control, not to mention more competitive alternatives than one license holder. Further, it does so without jeopardizing the 24 MHz of public safety spectrum, the 60 MHz of commercial spectrum, or the auction proceeds that will fund the $1 billion interoperable public safety grant program and the $1.5 billion converter-box program for digital television. The prospect of subscribers from tens of thousands of public safety agencies and the pooling of spectrum will give multiple parties incentives to negotiate with First Responders. Proposals could come from winners of this auction as well as holders of other licenses, all of whom may be willing to provide public safety access to additional spectrum and their existing infrastructure in return for access to public safety's spectrum.

This approach will also leave more spectrum available to create a greater diversity of geographic license sizes and spectrum blocks. The Commission would then have an easier time creating options for a wide variety of providers: national, regional, and local; large, medium, and small; incumbent and new entrant; rural and urban.

It is imperative that the Commission abide by the statutory timetable for the auction. Achieving the right balance between the commercial and public safety interests, however, will take fundamentally more flexibility, coordination, and cooperation than can possibly be achieved through a hastily fabricated proposal reverse-engineered into an auction. Separating this matter from the auction would also allow us to take a more cautious and deliberative approach, not just the 28 days that could be allotted to the pleading cycle without jeopardizing the January 28, 2008, statutory deadline for start of the auction. Moreover, both the First Responders and the commercial entities may see need for adjustments. Such adjustments are manageable when relationships are based on contracts and service agreements, which can have shorter durations, modification provisions, and termination clauses. Spectrum licenses, by contrast, cannot be easily modified or terminated. De-linking the debate from the auction would also free bidders to make their auction plans, rather than continue to hold them hostage as delays over this controversy continue to threaten the time that will remain between release of the rules and the auction.

If Frontline and others believe in their business plans and are genuine in their desire to help public safety, there should be no need to stack the deck. They can still participate in the auction, enter into an agreement with First Responders, and voluntarily operate their networks under a wholesale and open access model. If they cannot raise enough money to win spectrum at a fairly structured auction, this is an indication that their proposal will not adequately serve either public safety or consumers. Honest, market-based auctions work when free of onerous service conditions. They have fostered a vibrant and competitive wireless industry, and produced tens of billions of dollars in Federal revenue. But the rules are critical. If done right, they create a fair playing field. If rigged, they sway the auction toward particular parties and particular business models. Let us not mistake this proposal for what it is: yet another attempt to get valuable spectrum on the cheap.

Sincerely,

cc: Commissioner Michael J. Copps
Commissioner Jonathan S. Adelstein
Commissioner Deborah Taylor Tate
Commissioner Robert M. McDowell

Joe Barton

Joe Barton, Ranking Member,
Committee on Energy & Commerce

Fred Upton

Fred Upton, Ranking Member,
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Ed Whitfield

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Mike Ferguson

Mike Rogers

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John Sullivan

John Sullivan

The New York Times
nytimes.com

April 4, 2008

An Auction That Google Was Content to Lose

By MIGUEL HELFT

SAN FRANCISCO — Google had little desire to own a premium slice of the nation's airwaves, but a week into a federal auction for wireless licenses, it found itself at risk of being the winning bidder for the coveted spectrum.

The spectrum would have cost $4.7 billion, Google's biggest single investment. Winning would have thrust the company into the wireless business and could have sent Google's battered shares even lower.

Google and other companies began publicly discussing some of the auction's behind-the-scenes action after an anti-collusion rule prohibiting participants from commenting was lifted Thursday. Google bid in the auction to honor a promise made to the Federal Communications Commission.

Last summer, the company vowed to bid a minimum of $4.6 billion, the reserve price, for a set of frequencies known as the C block as long as the F.C.C. imposed some "openness" conditions on it. The F.C.C. imposed two conditions, requiring the owner of the spectrum to open its network to devices and services from third parties.

Google's main goal, however, was not to win, but to make sure the reserve price was met so that the openness conditions would become effective, ensuring that its search, e-mail, maps and other services would be easily available on phones operating on those frequencies. And while the company had willingly taken the risk that it could end up winning, it was not without trepidation.

"Our primary goal was to trigger the openness conditions," said Richard Whitt, Google's Washington telecommunications and media counsel.

The auction raised more than $19 billion, far more than expected. Still, some critics said the auction failed to promote competition, as it solidified the positions of AT&T and Verizon Wireless, the two biggest carriers, who won a majority of the licenses. Some economists and others remain critical of the way the auction was set up, pointing out that among other things, two groups of frequencies, known as the A and B blocks, sold at much higher prices than the C block.

Ralph de la Vega, president and chief executive of AT&T's wireless unit, said in a news conference Thursday that his company was pleased with the auction's outcome. But he noted that the Google-backed conditions on the C block had an effect on pricing.

"People put a premium on spectrum that is not encumbered by excessive regulations," Mr. de la Vega said.

Verizon Wireless has scheduled a news conference for Friday morning to discuss its plans.

In an interview late Thursday, the F.C.C. chairman, Kevin J. Martin, once again called the auction a success. "What was important was not only the success of the auction from a money standpoint but also the ability to have an open-access platform that I think is going to transform the whole wireless industry," Mr. Martin said.

From a windowless "war room" at Google's headquarters in Mountain View, Calif., the small auction team placed bids electronically. Eric E. Schmidt, the chief executive, and the founders, Larry Page and Sergey Brin, visited frequently.

For much of the first week, Google gradually topped its own bids. With no competitors emerging, anxiety grew.

"There were definitely some people at the company that had cold feet," said Larry Alder, a product manager in Google's auction team.

The team, which had persuaded Google's board last summer to back the company's bid, was asked again to make its case to top executives and the board.

"People had to be convinced that it was the right business decision," Mr. Alder said.

Google declined to discuss what it would have done had it won the licenses. But it strongly suggested that it would not have become a wireless operator. Instead it would have formed partnerships with other companies. Still, after placing a $4.71 billion bid early on Jan. 24, meeting the reserve price, members of the team remained in a state of high alert and anxiety.

"We kept hitting the 'refresh' button on the browser" to see if others would bid higher, said Minnie Ingersoll, another product manager on the auction team. No one topped Google's bid that day or the following day, a Friday, and Google executives went into the Super Bowl weekend thinking they might end up owning the C block licenses after all.

"There was a feeling that we were picking up something at a great price," Mr. Alder said.

If Google felt it had a bargain, it wasn't by much. The company declined to top the $4.74 billion bid that Verizon finally placed the following Tuesday.

"If Google had won a license, there was only downside risk for them," said Gregory L. Rosston, a former F.C.C. official and senior fellow at the Stanford Institute for Economic Policy Research. "Now they can just spend $1 million a year on a law firm to ensure Verizon lives up to the openness requirements."

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April 24, 2008

Via E-Mail & Hand Delivery

The Honorable Edward J. Markey
Committee on Energy and Commerce
Subcommittee on Telecommunications and the Internet
2125 Rayburn House Office Building
Washington, DC 20515

Dear Mr. Chairman:

This letter is respectfully submitted to supplement my testimony to the Subcommittee on April 15, 2008 regarding the 700 MHz Auction. More specifically, it addresses the concern you raised about the rate of progress in providing wireless service in the Tip O'Neill tunnel, part of the "Big Dig" project in Boston. I also appreciate the opportunity to respond to comments linking the Big Dig to Verizon Wireless' overall network quality and its ability to provide public safety service.

The Big Dig project was "one of the largest, most technically difficult and environmentally challenging infrastructure projects ever undertaken in the United States. The project spanned 7.8 miles of highway, 161 lane miles in all, about half in tunnels."[1] Construction began in 1991 and was substantially completed in early 2006.

Since 1998, Verizon Wireless has been attempting to provide commercial wireless service in the tunnels of the Big Dig. Verizon Wireless' requests to work with the Massachusetts Transportation Authority (MTA) to install a wireless network as the Big Dig was constructed, the most efficient means of installing a wireless system, were rebuffed by the MTA, despite Verizon Wireless' successful track record providing wireless service in the New York City tunnels and the Washington, D.C. subway system. When the MTA finally issued a Request for Proposals for wireless service in the Big Dig tunnels in 2003, it demanded exorbitant "rents" for access to the tunnels, in addition to requiring that wireless service providers bear all capital expenses of the huge and complex project. After years of stalemated negotiations with the MTA, in 2006, the state legislature intervened, passing a law requiring the Massachusetts Department of Telecommunications and Energy (DTE) to conduct a hearing to determine a fair and reasonable rent, ultimately resulting in a much lower rate than the MTA had been demanding since issuing its RFP in 2003, and permitting a multi-carrier effort to proceed. This time-consuming process could have been avoided if the MTA had not made such exorbitant demands in the first place.

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[1] MTA Website, Project Background.

Since February 4 of this year, a multi-carrier team and the MTA, under its new leadership, have been working together to provide service throughout Big Dig tunnels. The massive nature of the project is further complicated due to the fact that network builders may only work on the multi-carrier system for 4 hours each night. This requires an elongated timeframe, and wireless companies have asked the MTA to allow our contractors more hours to work in the tunnel at night, and to shorten the MTA's approval process (from the current average of 14 days to a shorter period of 2-3 days), so that progress can be made more quickly.

The unique history of the Big Dig should not serve as an exemplar of Verizon Wireless' ability to support other public infrastructure and public safety projects. We have provided excellent service in all the New York City tunnels and the Washington, DC subway system for years, because the state and local authorities in those jurisdictions took a far different approach than the MTA.

Verizon Wireless has repeatedly demonstrated that its network is the best, by any measure, whether in providing day-to-day service to customers or in supporting public safety during emergency situations. We are very proud of our record. When disaster strikes, Verizon Wireless pulls out all the stops to keep wireless service live and available. Verizon Wireless' stellar performances during the September 11 attacks, the NY City and Northeast U.S. blackout, Hurricane Katrina, Hurricane Rita, the California wildfires, the Colorado storms, and the Tennessee tornados, are without parallel in the history of technology in service to our nation's first responders.

The Tennessee tornados represent the most recent example of how Verizon Wireless has performed during emergencies. When the tornados struck Tennessee in February 2008, many customers were without electricity, landline telephone service, Internet or e-mail services. The Verizon Wireless network continued at over 95% efficiency, supporting calls to emergency workers for assistance and families for comfort. Verizon Wireless also set up a Communications Command Center to provide assistance, a lifeline to residents regardless of who they subscribed to for wireless service.

Verizon Wireless received numerous thanks from customers for its untiring efforts in Tennessee. Keith Robertory, Manager of Disaster Services Technology for the Red Cross noted, "...the only cell service working in the area of disaster headquarters was Verizon Wireless. Therefore, we shipped a large quantity of Verizon Wireless cell phones to the site. Cell coverage outside was just fine, however, once inside headquarters the coverage was next to nothing. We coordinated with Verizon Wireless, and the next day they installed cellular repeaters which greatly enhanced our coverage. We are very thankful for this partnership and the ongoing support Verizon Wireless provides."

Verizon Wireless also furthers public safety in many ways every single day. For example, Verizon Wireless recently deployed 19,500 internationally enabled BlackBerry 8830 World Edition Smartphones to more than 56 Federal Bureau of Investigation (FBI) offices worldwide. The devices support the agency's Sensitive But Unclassified (SBU) Mobility Program, providing FBI agents with mobile access to federal law enforcement information that was previously inaccessible from handheld wireless devices. As FBI Chief Information Officer Zalmai Azmi said, "These devices allow FBI employees access not only to the internet, e-mail calendar and taskings, but also to applications critical to our mission such as the no-fly list, missing and kidnapped persons, crime alerts, etc."

Additionally, Verizon Wireless is the largest wireless provider to the federal government under the GSA Supply Schedule, and the largest network operator for Wireless Priority Services in the country. When the NY/NJ Port Authority closed the major New York tunnels without coordination in response to the July 7, 2005 London subway bombings, Verizon Wireless led the industry in working with the Department of Homeland Security to create Emergency Wireless Protocols to provide a balance between the needs of national security and the need of the public for vital wireless communications.

Furthermore, our GPS-enabled handsets have helped first responders locate accident victims and crime victims, saving many lives, as well as helping law enforcement locate fleeing suspects. Several letters from law enforcement and other agencies lauding our efforts in this regard are attached. In a letter dated October 10, 2004, Ernie Allen, President and CEO of the National Center for Missing and Exploited Children, commended the company for tracking the location of a cell phone belonging to a child abductor who had indicated an intent to kill the child. Our technicians located the abductor and the child was rescued safely. Mr. Allen wrote, "this is a textbook example of the vital importance of rapid response. We are deeply grateful for Verizon's terrific support and for the professionalism and quick assistance of [the Verizon technician]."

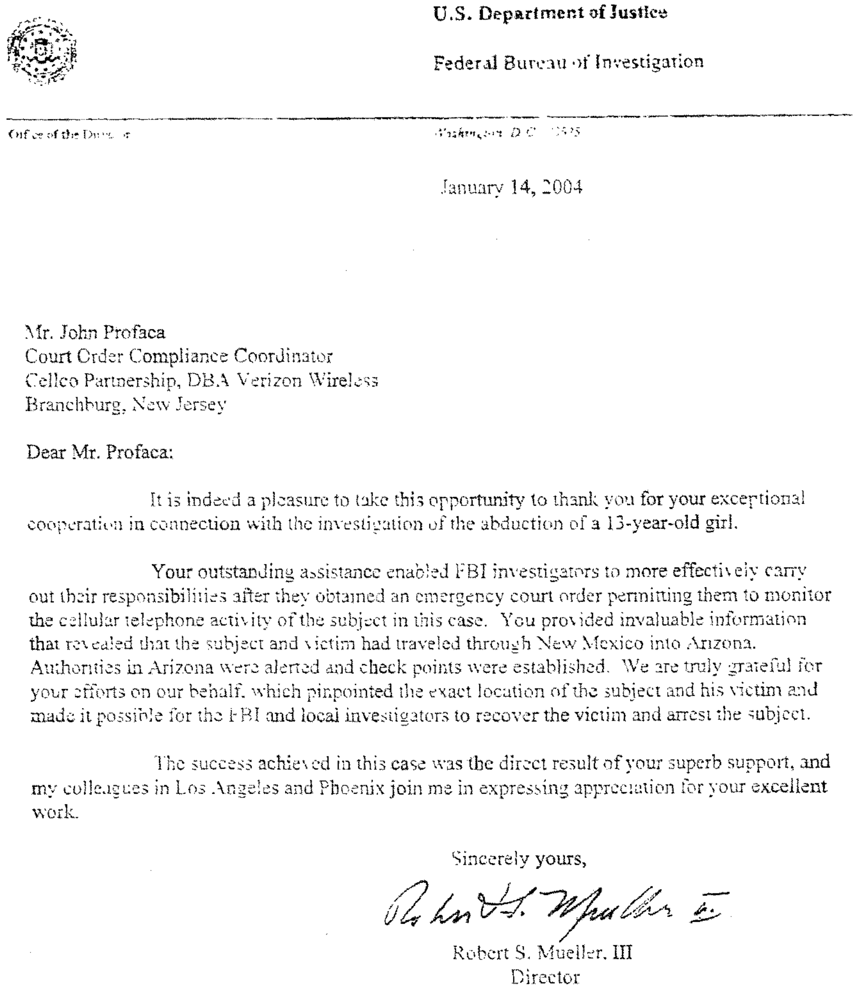
The rate of progress of providing wireless service in the Big Dig is not due to the actions of Verizon Wireless, and it should not be viewed as in any way reflecting our ability and our commitment to serve the public safety community. If anything, it demonstrates Verizon

Wireless' commitment and perseverance in seeking to provide wireless service in important public venues, no matter how long it takes.

Sincerely,

Steven E. Zipperstein

cc: The Honorable John D. Dingell, Chairman, Committee on Energy and Commerce
The Honorable Joe Barton, Ranking Member, Committee on Energy and Commerce
The Honorable Cliff Stearns, Ranking Member, Subcommittee on Telecommunications and the Internet



U.S. Department of Justice

Federal Bureau of Investigation

Office of the Director

Washington, D.C. 20535

January 14, 2004

Mr. John Profaca
Court Order Compliance Coordinator
Cellco Partnership, DBA Verizon Wireless
Branchburg, New Jersey

Dear Mr. Profaca:

It is indeed a pleasure to take this opportunity to thank you for your exceptional cooperation in connection with the investigation of the abduction of a 13-year-old girl.

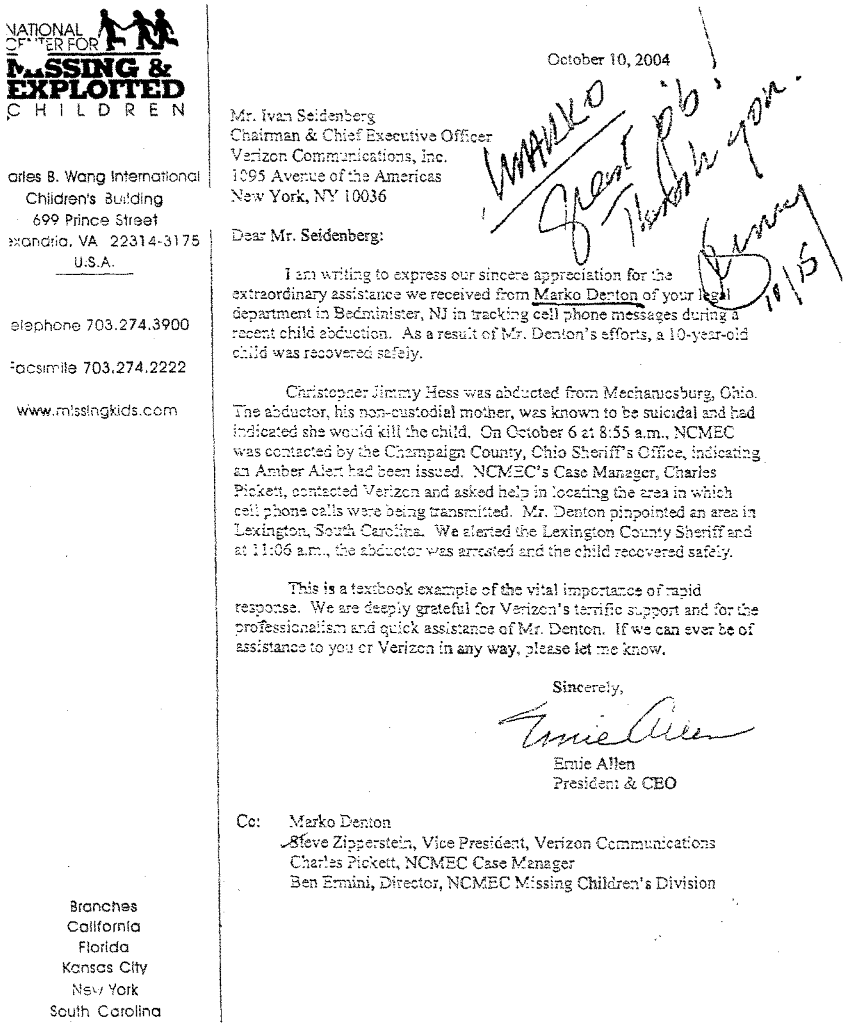
Your outstanding assistance enabled FBI investigators to more effectively carry out their responsibilities after they obtained an emergency court order permitting them to monitor the cellular telephone activity of the subject in this case. You provided invaluable information that revealed that the subject and victim had traveled through New Mexico into Arizona. Authorities in Arizona were alerted and check points were established. We are truly grateful for your efforts on our behalf, which pinpointed the exact location of the subject and his victim and made it possible for the FBI and local investigators to recover the victim and arrest the subject.

The success achieved in this case was the direct result of your superb support, and my colleagues in Los Angeles and Phoenix join me in expressing appreciation for your excellent work.

Sincerely yours,

Robert S. Mueller III

Robert S. Mueller, III
Director



NATIONAL CENTER FOR
MISSING &
EXPLOITED
CHILDREN

arles B. Wang International
Children's Building
699 Prince Street
exandria, VA 22314-3175
U.S.A.

elephone 703.274.3900

acsimile 703.274.2222

www.missingkids.com

October 10, 2004

MARKO
Great job!
Thank you.
Ivan
10/15

Mr. Ivan Seidenberg
Chairman & Chief Executive Officer
Verizon Communications, Inc.
1095 Avenue of the Americas
New York, NY 10036

Dear Mr. Seidenberg:

I am writing to express our sincere appreciation for the extraordinary assistance we received from Marko Denton of your legal department in Bedminister, NJ in tracking cell phone messages during a recent child abduction. As a result of Mr. Denton's efforts, a 10-year-old child was recovered safely.

Christopher Jimmy Hess was abducted from Mechanicsburg, Ohio. The abductor, his non-custodial mother, was known to be suicidal and had indicated she would kill the child. On October 6 at 8:55 a.m., NCMEC was contacted by the Champaign County, Ohio Sheriff's Office, indicating an Amber Alert had been issued. NCMEC's Case Manager, Charles Pickett, contacted Verizon and asked help in locating the area in which cell phone calls were being transmitted. Mr. Denton pinpointed an area in Lexington, South Carolina. We alerted the Lexington County Sheriff and at 11:06 a.m., the abductor was arrested and the child recovered safely.

This is a textbook example of the vital importance of rapid response. We are deeply grateful for Verizon's terrific support and for the professionalism and quick assistance of Mr. Denton. If we can ever be of assistance to you or Verizon in any way, please let me know.

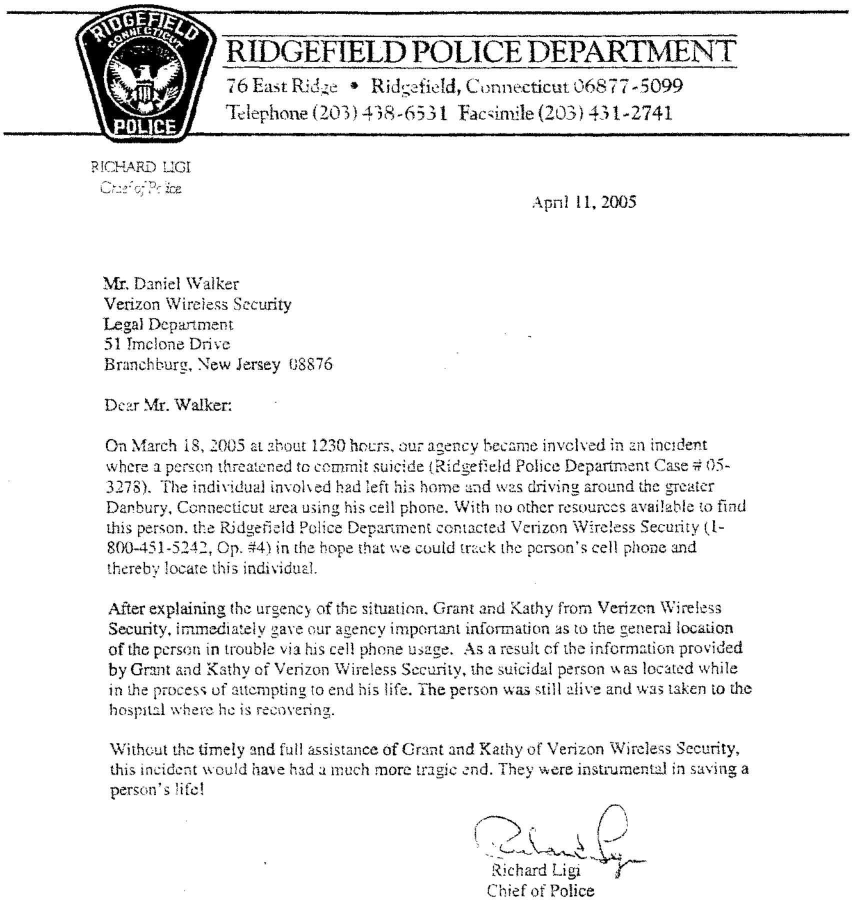
Sincerely,

Ernie Allen

Ernie Allen
President & CEO

Cc: Marko Denton
Steve Zipperstein, Vice President, Verizon Communications
Charles Pickett, NCMEC Case Manager
Ben Ermini, Director, NCMEC Missing Children's Division

Branches
California
Florida
Kansas City
New York
South Carolina



RIDGEFIELD POLICE DEPARTMENT
76 East Ridge • Ridgefield, Connecticut 06877-5099
Telephone (203) 438-6531 Facsimile (203) 431-2741

RICHARD LIGI
Chief of Police

April 11, 2005

Mr. Daniel Walker
Verizon Wireless Security
Legal Department
51 Imclone Drive
Branchburg, New Jersey 08876

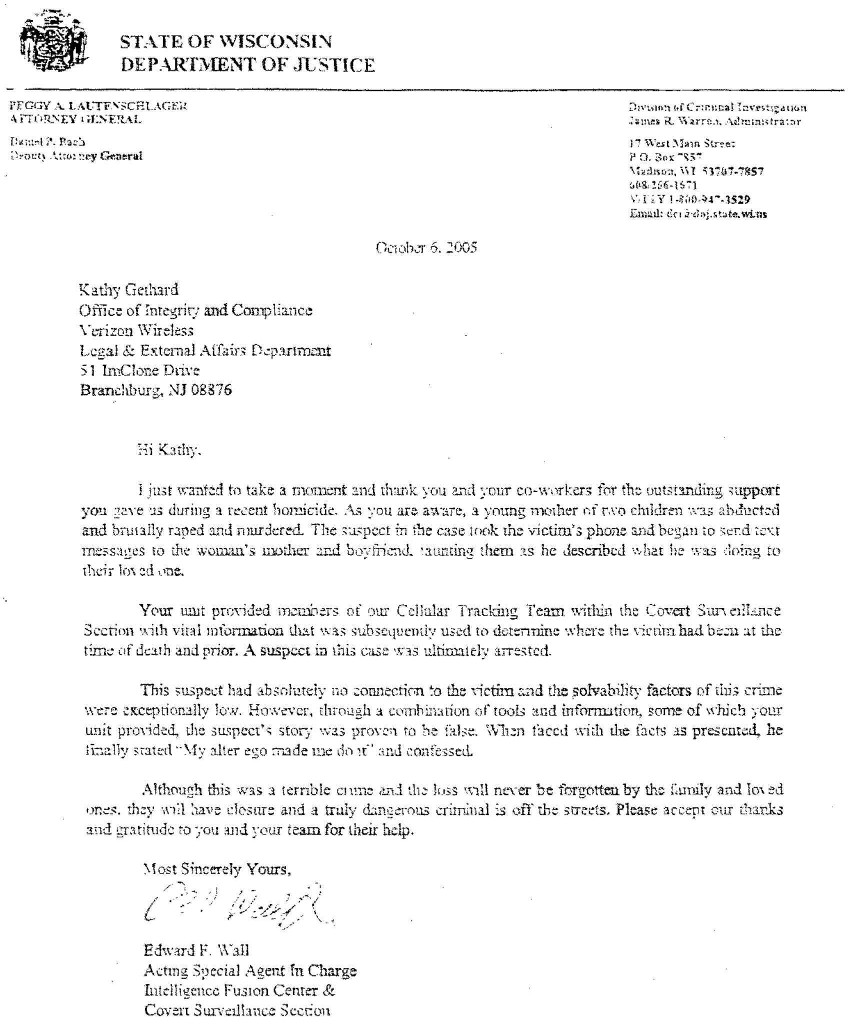
Dear Mr. Walker:

On March 18, 2005 at about 1230 hours, our agency became involved in an incident where a person threatened to commit suicide (Ridgefield Police Department Case # 05-3278). The individual involved had left his home and was driving around the greater Danbury, Connecticut area using his cell phone. With no other resources available to find this person, the Ridgefield Police Department contacted Verizon Wireless Security (1-800-451-5242, Op. #4) in the hope that we could track the person's cell phone and thereby locate this individual.

After explaining the urgency of the situation, Grant and Kathy from Verizon Wireless Security, immediately gave our agency important information as to the general location of the person in trouble via his cell phone usage. As a result of the information provided by Grant and Kathy of Verizon Wireless Security, the suicidal person was located while in the process of attempting to end his life. The person was still alive and was taken to the hospital where he is recovering.

Without the timely and full assistance of Grant and Kathy of Verizon Wireless Security, this incident would have had a much more tragic end. They were instrumental in saving a person's life!

Richard Ligi
Chief of Police



STATE OF WISCONSIN
DEPARTMENT OF JUSTICE

PEGGY A. LAUTENSCHLAGER
ATTORNEY GENERAL

Daniel P. Bach
Deputy Attorney General

Division of Criminal Investigation
James R. Warren, Administrator

17 West Main Street
P.O. Box 7857
Madison, WI 53707-7857
608/266-1671
V/TTY 1-800-947-3529
Email: dci@doj.state.wi.us

October 6, 2005

Kathy Gethard
Office of Integrity and Compliance
Verizon Wireless
Legal & External Affairs Department
51 ImClone Drive
Branchburg, NJ 08876

Hi Kathy,

I just wanted to take a moment and thank you and your co-workers for the outstanding support you gave us during a recent homicide. As you are aware, a young mother of two children was abducted and brutally raped and murdered. The suspect in the case took the victim's phone and began to send text messages to the woman's mother and boyfriend, taunting them as he described what he was doing to their loved one.

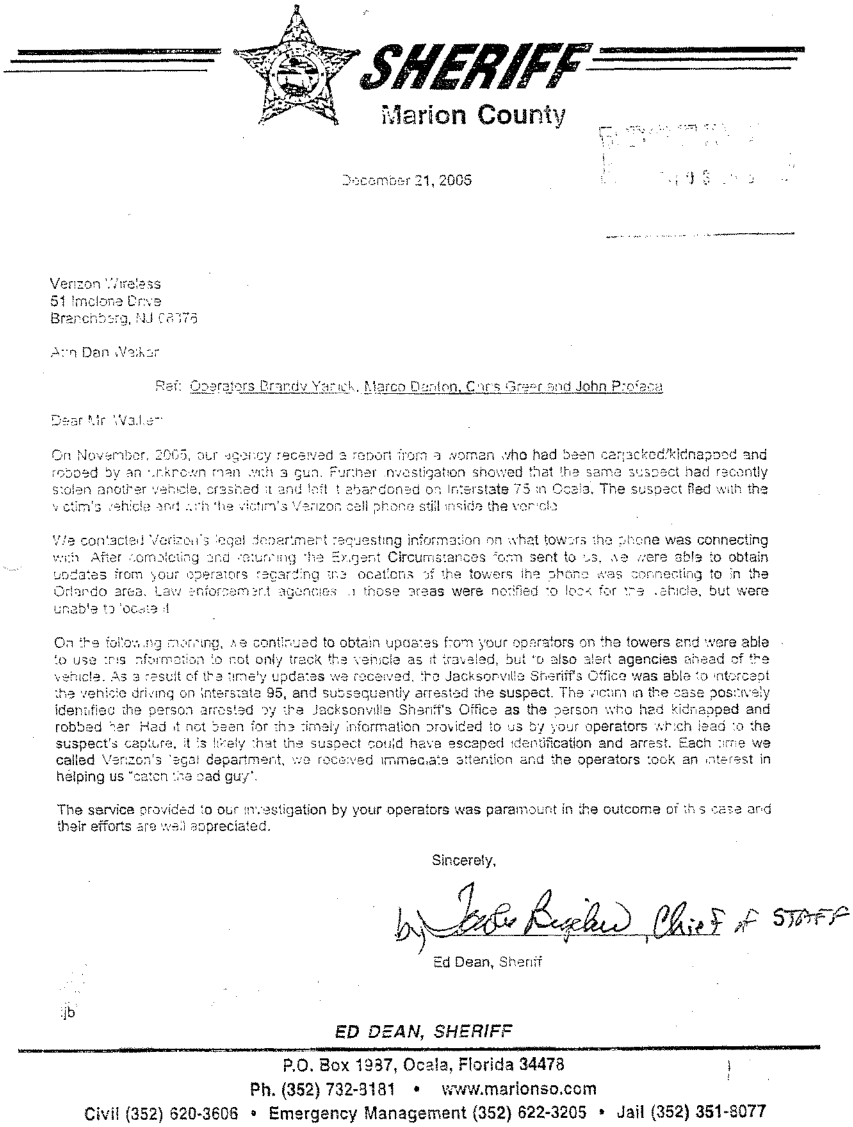
Your unit provided members of our Cellular Tracking Team within the Covert Surveillance Section with vital information that was subsequently used to determine where the victim had been at the time of death and prior. A suspect in this case was ultimately arrested.

This suspect had absolutely no connection to the victim and the solvability factors of this crime were exceptionally low. However, through a combination of tools and information, some of which your unit provided, the suspect's story was proven to be false. When faced with the facts as presented, he finally stated "My alter ego made me do it" and confessed.

Although this was a terrible crime and the loss will never be forgotten by the family and loved ones, they will have closure and a truly dangerous criminal is off the streets. Please accept our thanks and gratitude to you and your team for their help.

Most Sincerely Yours,

Edward F. Wall
Acting Special Agent In Charge
Intelligence Fusion Center &
Covert Surveillance Section



SHERIFF
Marion County

December 21, 2005

Verizon Wireless
51 Imclone Drive
Branchburg, NJ 08876

Attn Dan Walker

Ref: Operators Brandy Yarick, Marco Danton, Chris Greer and John Profaca

Dear Mr Walker

On November, 2005, our agency received a report from a woman who had been carjacked/kidnapped and robbed by an unknown man with a gun. Further investigation showed that the same suspect had recently stolen another vehicle, crashed it and left it abandoned on Interstate 75 in Ocala. The suspect fled with the victim's vehicle and with the victim's Verizon cell phone still inside the vehicle

We contacted Verizon's legal department requesting information on what towers the phone was connecting with. After completing and returning the Exigent Circumstances form sent to us, we were able to obtain updates from your operators regarding the locations of the towers the phone was connecting to in the Orlando area. Law enforcement agencies in those areas were notified to look for the vehicle, but were unable to locate it

On the following morning, we continued to obtain updates from your operators on the towers and were able to use this information to not only track the vehicle as it traveled, but to also alert agencies ahead of the vehicle. As a result of the timely updates we received, the Jacksonville Sheriff's Office was able to intercept the vehicle driving on Interstate 95, and subsequently arrested the suspect. The victim in the case positively identified the person arrested by the Jacksonville Sheriff's Office as the person who had kidnapped and robbed her. Had it not been for the timely information provided to us by your operators which lead to the suspect's capture, it is likely that the suspect could have escaped identification and arrest. Each time we called Verizon's legal department, we received immediate attention and the operators took an interest in helping us "catch the bad guy".

The service provided to our investigation by your operators was paramount in the outcome of this case and their efforts are well appreciated.

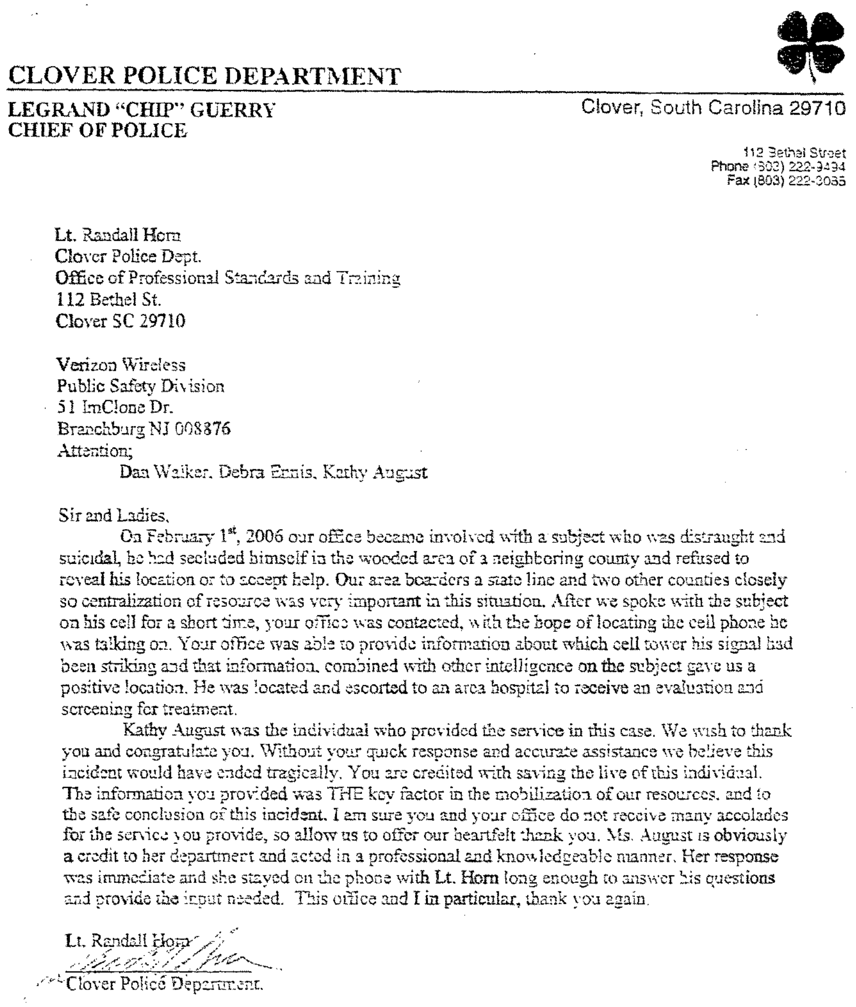
Sincerely,

by [illegible], Chief of STAFF
Ed Dean, Sheriff

:jb

ED DEAN, SHERIFF

P.O. Box 1987, Ocala, Florida 34478
Ph. (352) 732-8181 • www.marionso.com
Civil (352) 620-3606 • Emergency Management (352) 622-3205 • Jail (352) 351-8077



CLOVER POLICE DEPARTMENT

LEGRAND "CHIP" GUERRY
CHIEF OF POLICE

Clover, South Carolina 29710

112 Bethel Street
Phone (803) 222-9494
Fax (803) 222-3035

Lt. Randall Horn
Clover Police Dept.
Office of Professional Standards and Training
112 Bethel St.
Clover SC 29710

Verizon Wireless
Public Safety Division
51 ImClone Dr.
Branchburg NJ 008876
Attention;
Dan Walker. Debra Ennis. Kathy August

Sir and Ladies,

On February 1st, 2006 our office became involved with a subject who was distraught and suicidal, he had secluded himself in the wooded area of a neighboring county and refused to reveal his location or to accept help. Our area boarders a state line and two other counties closely so centralization of resource was very important in this situation. After we spoke with the subject on his cell for a short time, your office was contacted, with the hope of locating the cell phone he was talking on. Your office was able to provide information about which cell tower his signal had been striking and that information, combined with other intelligence on the subject gave us a positive location. He was located and escorted to an area hospital to receive an evaluation and screening for treatment.

Kathy August was the individual who provided the service in this case. We wish to thank you and congratulate you. Without your quick response and accurate assistance we believe this incident would have ended tragically. You are credited with saving the live of this individual. The information you provided was THE key factor in the mobilization of our resources, and to the safe conclusion of this incident. I am sure you and your office do not receive many accolades for the service you provide, so allow us to offer our heartfelt thank you. Ms. August is obviously a credit to her department and acted in a professional and knowledgeable manner. Her response was immediate and she stayed on the phone with Lt. Horn long enough to answer his questions and provide the input needed. This office and I in particular, thank you again.

Lt. Randall Horn
Clover Police Department.

Sector Commander
Sector Hampton Roads

June 23, 2006

Mr. John Profaca
Verizon Wireless
51 Imclone Drive
Branchburg, NJ 08876

Dear Mr. Profaca,

On Tuesday night, May 16th, Sector Hampton Roads Search and Rescue watchstanders contacted you requesting assistance in the search for three missing teenage boys potentially lost at sea in a small craft off of Hampton, Virginia. Your diligent search of their cell phone calls to 911 and research into what towers were used, yielded valuable information that allowed us to narrow our search areas. The three boys were located safely by helicopter just before daybreak, very close to where your information indicated they would likely be.

I truly value the cooperation and spirit of partnership that exists between Verizon Wireless and Coast Guard Search and Rescue watchstanders. I look forward to more opportunities to take advantage of advances in the E911 system to allow us to take the "Search" out of "Search and Rescue!"

Sincerely,

Patrick B. Trapp
Captain, U.S. Coast Guard

NEW YORK STATE POLICE
BLDG 22 1220 WASHINGTON AVE
ALBANY, NEW YORK 12226-2252

PRESTON L. FELTON
FIRST DEPUTY SUPERINTENDENT

May 30, 2007

Mr. Steven E. Zipperstein
Vice President, Legal & External Affairs
Verizon Wireless – Law Enforcement
Response Team
180 Washington Valley Road
Bedminster, New Jersey 07921

Dear Mr. Zipperstein:

On April 24, 2007, at approximately 3:15 p.m., Trooper Matthew Gombosi was shot while conducting a traffic stop in Margaretville, Delaware County, New York. That incident commenced an extensive manhunt which resulted in the search of a residence by members of the State Police Mobile Response Team the following morning. Upon entering the dwelling, in an attempt to locate the suspect, the assailant initiated a gun battle which resulted in the tragic death of Trooper David Brinkerhoff and the wounding of Trooper Richard Mattson.

I would like to take this opportunity to personally thank you and the members of the Verizon Wireless Law Enforcement Resource Team for the assistance rendered to the State Police during this two-day period. Please know that the men and women of the New York State Police are truly grateful for the support shown during this difficult time.

Please be assured of the assistance our members are ready to provide your department should the need arise. We share a common goal of protecting the citizens of our State and are only too aware of the sacrifices those of us in public service are called upon to make in carrying out that mission.

Sincerely,

Preston L. Felton
Acting Superintendent

U.S. Department of Justice

United States Marshals Service

Western District of Virginia

Abingdon Division
P O Box 648
Abingdon Virginia 24212
Telephone 276-628-9102

May 22, 2007

To: Deborah Ennis
180 Washington Valley Road
Bedminster, NJ 07921

From: G. Wayne Pike
United States Marshal
Western District of Virginia

Re: Assistance by Mr. Grant Fields

Dear Mrs. Ennis,

I am writing to express my sincere appreciation for the professionalism and assistance rendered by one of your employees. Deputy Marshal Matt Davis advises me that on May 18, 2007 the Abingdon Division was engaged in an investigation in attempt to locate the perpetrator charged with the abduction of a 10 year old girl. Investigative information revealed the existence of a Verizon Wireless phone attached to the subjects name. Deputy Davis advises that upon contacting Mr. Grant Fields with the appropriate legal process, he expeditiously rendered assistance which proved extremely fruitful in the investigation. Ultimately, the fugitive was apprehended that evening.

I wish to commend you and your staff on the exceptional professionalism and assistance rendered in this serious investigation. Without the assistance of your company, and the exceptional staff who are employed by your department, many violent and serious offenders would not be apprehended. I appreciate all of your efforts and thank you for your time and assistance. If my staff or I may be of any assistance, please do not hesitate to contact me.

Sincerely,

G. Wayne Pike

Cc: Grant Fields

md/GWP

OFFICE OF THE DISTRICT ATTORNEY

BRUCE L. CASTOR, JR.
DISTRICT ATTORNEY

RISA VETRI FERMAN
FIRST ASSISTANT DISTRICT ATTORNEY

OSCAR P. VANCE, JR.
CHIEF COUNTY DETECTIVE

ANNE C. METZ
OFFICE ADMINISTRATOR

COUNTY OF MONTGOMERY
COURT HOUSE
P.O.BOX 311
NORRISTOWN, PENNSYLVANIA
19404-0311

STDISTRICT ATTORNEY'S OFFICE (610) 278-3090
STDISTRICT ATTORNEY'S FAX (610) 278-3095
COUNTY DETECTIVE BUREAU (610) 278-3368

December 31, 2007

Mr. Steve Zipperstein
VP of Legal Affairs
Verizon Wireless
1 Verizon way
Basking Ridge, NJ 07920

Dear Mr. Zipperstein,

On Sunday, December 9, 2007 Roger Guzman was fatally stabbed outside of a night club in Norristown, Pennsylvania. The investigation lead to an arrest warrant being issued for an Alfonso Vasquez also of Norristown. On the evening of December 12, 2007, detectives working with your office were able to track Vasquez as he travelled west across the United States by his cell phone activity. Vasquez and an associate, Jose Ramirez were located and arrested without incident by the South Dakota Highway Patrol in the early morning hours of December 13, 2007.

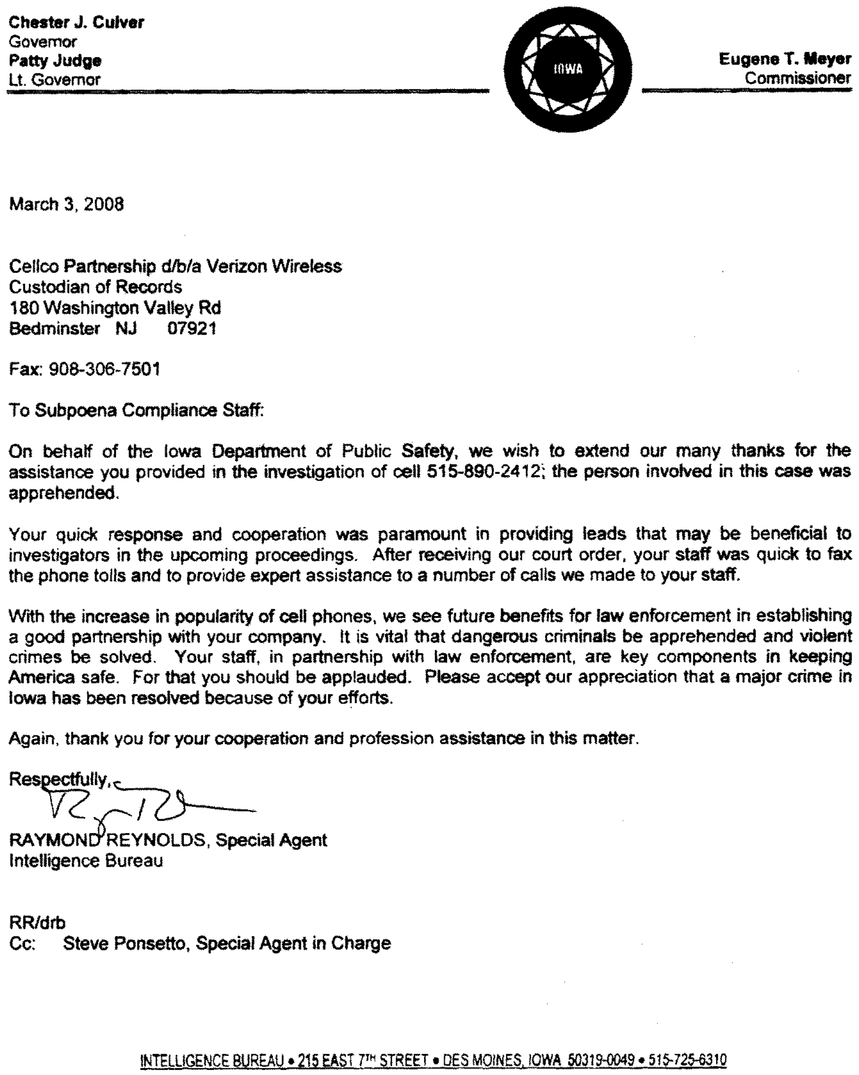
We in law enforcement often complain about the lack of assistance in a timely manner from the private sector. This was certainly not the case in this murder investigation. I want to personally thank **Neil Guerriero, Shirley Jones** and **John Profaca** of your office for the outstanding assistance they provided. Neil, Shirley and John worked through the night with detectives. Their work resulted in the arrest of Vasquez and Ramirez without injury to any officers. I cannot thank them enough.

Technology and cooperation with the private sector is what will give law enforcement the advantage in the fight against crime in the 21st century. Your employees are to be commended for their diligence and work ethic Please extend our thanks to them. Their actions reflect not only on them but the professionalism of all Verizon employees.

Respectfully,

D/Lt. Richard L. Peffall
Major Crimes Unit
610-278-3981

Cc: Ms. Kimberly Brown



Chester J. Culver
Governor
Patty Judge
Lt. Governor

IOWA

Eugene T. Meyer
Commissioner

March 3, 2008

Cellco Partnership d/b/a Verizon Wireless
Custodian of Records
180 Washington Valley Rd
Bedminster NJ 07921

Fax: 908-306-7501

To Subpoena Compliance Staff:

On behalf of the Iowa Department of Public Safety, we wish to extend our many thanks for the assistance you provided in the investigation of cell 515-890-2412; the person involved in this case was apprehended.

Your quick response and cooperation was paramount in providing leads that may be beneficial to investigators in the upcoming proceedings. After receiving our court order, your staff was quick to fax the phone tolls and to provide expert assistance to a number of calls we made to your staff.

With the increase in popularity of cell phones, we see future benefits for law enforcement in establishing a good partnership with your company. It is vital that dangerous criminals be apprehended and violent crimes be solved. Your staff, in partnership with law enforcement, are key components in keeping America safe. For that you should be applauded. Please accept our appreciation that a major crime in Iowa has been resolved because of your efforts.

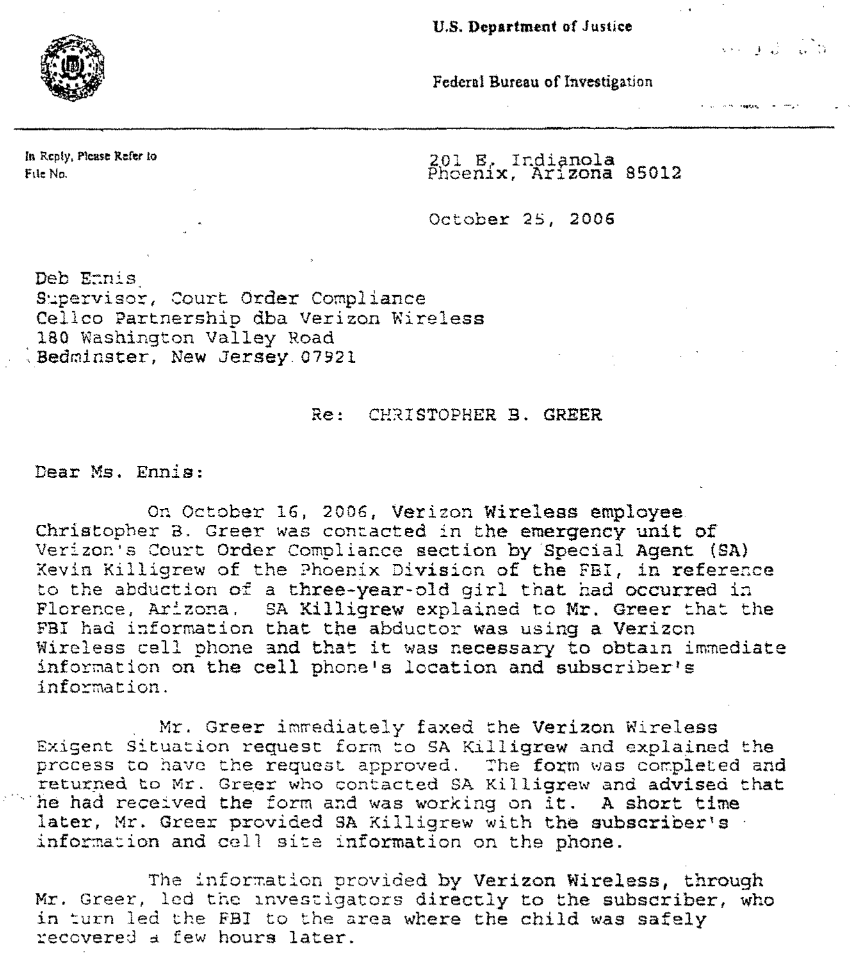
Again, thank you for your cooperation and profession assistance in this matter.

Respectfully,

RAYMOND REYNOLDS, Special Agent
Intelligence Bureau

RR/drb
Cc: Steve Ponsetto, Special Agent in Charge

INTELLIGENCE BUREAU • 215 EAST 7TH STREET • DES MOINES, IOWA 50319-0049 • 515-725-6310



U.S. Department of Justice

Federal Bureau of Investigation

In Reply, Please Refer to
File No.

201 E. Indianola
Phoenix, Arizona 85012

October 25, 2006

Deb Ennis
Supervisor, Court Order Compliance
Cellco Partnership dba Verizon Wireless
180 Washington Valley Road
Bedminster, New Jersey 07921

Re: CHRISTOPHER B. GREER

Dear Ms. Ennis:

On October 16, 2006, Verizon Wireless employee Christopher B. Greer was contacted in the emergency unit of Verizon's Court Order Compliance section by Special Agent (SA) Kevin Killigrew of the Phoenix Division of the FBI, in reference to the abduction of a three-year-old girl that had occurred in Florence, Arizona. SA Killigrew explained to Mr. Greer that the FBI had information that the abductor was using a Verizon Wireless cell phone and that it was necessary to obtain immediate information on the cell phone's location and subscriber's information.

Mr. Greer immediately faxed the Verizon Wireless Exigent Situation request form to SA Killigrew and explained the process to have the request approved. The form was completed and returned to Mr. Greer who contacted SA Killigrew and advised that he had received the form and was working on it. A short time later, Mr. Greer provided SA Killigrew with the subscriber's information and cell site information on the phone.

The information provided by Verizon Wireless, through Mr. Greer, led the investigators directly to the subscriber, who in turn led the FBI to the area where the child was safely recovered a few hours later.

The Phoenix Division's Violent Crime Task Force was able to locate the child and make the arrest because of the professionalism and quick response of Mr. Greer, and Verizon Wireless' commitment to the law enforcement community. Mr. Greer's response, in light of the limited information and time available, was extremely professional, and his dedication to duty was evidenced in his quick response and attention to detail.

The Phoenix Division of the FBI would like to commend Mr. Greer for his outstanding performance and professionalism. It is a tribute to all agencies and companies involved when a cooperative effort results in the recovery of an abducted child, and the apprehension and arrest of a dangerous criminal.

Sincerely,

John Lewis

John E. Lewis
Special Agent in Charge

LUKAS, NACE,
GUTIERREZ & SACHS
CHARTERED
1650 Tysons Boulevard, Suite 1500
McLean, Virginia 22102
703 584 8678 • 703 584 8696 Fax
www.fcclaw.com

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George L. Lyon, Jr.
Pamela L. Gist
David A. LaFuria
Todd Slamowitz*
B. Lynn F. Ratnavale*
Steven M. Chernoff*
Katherine Patsas*

Consulting Engineers
Ali Kuzehkanani
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Of Counsel
Leonard S. Kolsky*
John Cimko*
J. K. Hage III*
John J. McAvoy*
Hon. Gerald S. McGowan*
Tamara Davis-Brown*

*Not Admitted in VA
Writer's Direct Dial
(703) 584-8663
lsachs@fcclaw.com

May 12, 2008

Ms. Amy Levine
Senior Counsel to the House Committee
on Energy and Commerce
U.S. House of Representatives
2125 Rayburn House Office Building
Washington, DC 20515

Re: Control of the Public Safety Broadband Licensee

Dear Ms. Levine:

This letter addresses the question whether any aspect of the relationship between the Public Safety Spectrum Trust Corporation ("PSST") and Cyren Call Communications Corporation ("Cyren Call") is inconsistent with any rules, orders or precedent of the Federal Communications Commission ("FCC") concerning licensee control, including the requirements of the FCC's Second Report and Order released on August 10, 2007. The answer is no. In all respects, the relationship complies with the FCC's regulatory requirements.

Background. The PSST is a non-profit corporation that was selected by the FCC to hold a license for a nationwide 10 MHz broadband public safety authorization. The PSST has a fifteen-member Board of Directors ("Board") representing a wide variety of public safety and other governmental organizations. The FCC mandated the organizational requirements of the PSST including specifying each organization for representation on the Board as well as the non-profit and non-stock nature of the PSST. The Board has elected a three-person Executive Committee to carry out activities as approved by the Board. The PSST, advised and represented by its own legal counsel, has entered into a letter agreement with Cyren Call to provide services to the PSST. The PSST's letter agreement with Cyren Call has only a month-to-month term. Because no governmental or other funding was made available to the PSST upon its formation, and the PSST had no assets or revenue stream to serve as collateral for a commercial loan, in order to carry out activities required by the FCC rules and to conduct day-to-day operations, the PSST obtained a loan from Cyren Call that reflects arm's-length normal commercial terms as to which the PSST again was advised and represented by its own legal counsel. Both the letter agreement and the loan documents have been made available to the Committee on Oversight and Government Reform and the Committee on Energy and Commerce.

Analysis. The Communications Act and the FCC rules prohibit a "transfer of control" of an FCC license without prior FCC approval. This prohibition can arise in the context of a premature transfer; that is, an intentional *de jure* assignment or transfer of control that occurs before the FCC has had an opportunity to act on an application requesting authority for the change. The FCC also has developed analyses to determine whether a licensee has relinquished *de facto* control to an unauthorized third party by virtue of the relationship between the parties. The FCC uses different analytical models to evaluate potential unauthorized *de facto* transfers of control depending on the type of service authorized, *e.g.*, broadcast, commercial wireless or private radio, and depending on the stage in the license cycle, principally whether before or after operations have commenced. All of these analyses are intended to determine whether a third party exercises or has the right to exercise a degree of control that is inconsistent with the FCC's requirements of its licensees.

The *Intermountain Microwave* case sets out the analytical framework for evaluating whether a common carrier wireless system licensee has improperly relinquished control of its facilities.[1] Although the evaluation of these factors has evolved over time, consistent with the evolution in wireless radio systems, the six factors considered by the FCC and listed below have remained constant. The issue presented is whether the relationship between the PSST and Cyren Call satisfies the FCC's standards for maintaining licensee control under the *Intermountain* test. For the reasons detailed herein, the arrangement between the parties is consistent with applicable FCC requirements and does not constitute a *de facto* transfer of control.

---

[1] *Intermountain Microwave*, 12 FCC 2nd 559 (1963) ("*Intermountain*"). The FCC historically has not applied the *Intermountain* test to private radio licenses such as that held by the PSST. Instead, the FCC has relied on a standard adopted in a matter involving certain assignment applications filed by Motorola, Inc. (Motorola) that applies a more general analysis (*See* Applications of Motorola, Inc. for 800 MHz Specialized Mobile Radio Trunked Systems, File Nos. 507505 et al., *Order* (issued July 30, 1985)). As described by the FCC, the factors in the Motorola test are "distinct from the six factors set forth in *Intermountain Microwave*. Under the Motorola standard, the Commission focuses primarily on issues related to the licensee's supervision and its propriety interest in equipment." *In the Matter of Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Development of Secondary Markets, Notice of Proposed Rulemaking*, WT Docket No. 00-230, 15 FCC Rcd 24203 at ¶ 72 (2000). Although the factors considered in the two tests are different, reflecting the fact that most systems evaluated under the Motorola analysis are operated for the private, internal use of the licensee rather than to provide third party commercial service to customers, the objective is the same: to determine whether the licensee has retained both *de jure* and *de facto* control of its system. The relationship between the PSST and Cyren Call satisfies both standards, but an analysis of the *Intermountain* factors may provide a more detailed description of why the FCC's control test is met.

1) Does the licensee have unfettered use of all facilities and equipment?

   The facilities and equipment to be operated pursuant to the PSST's FCC license will be part of a shared broadband network that will be the subject of a spectrum lease agreement ("Lease") and a Network Sharing Agreement ("NSA") between the PSST and the commercial D Block licensee as required by the FCC rules. It is expected that the Lease and the NSA will provide for a level of PSST control of facilities and equipment that is consistent with FCC requirements in the context of such a network. Cyren Call has no right of access to, much less "unfettered use" or control of, these shared network facilities and equipment. Any future PSST request for assistance to Cyren Call or any other third party would need to be consistent with the terms of the Lease and the NSA.

2) Who controls daily operations?

   In the future, the daily operation of the shared broadband network will be controlled by the D Block licensee under terms consistent with the Lease and the NSA and with the FCC's directive that the PSST ensure that service on the network meets public safety user requirements. At present, prior to network deployment, the daily operations of the PSST are controlled by its Executive Committee as authorized by its Board. It must be noted that the PSST has no staff; the Board and the Executive Committee serve as volunteers with the exception of a modest stipend for the individual who serves as the Chairman of the Board/Interim Chief Executive Officer/President. Therefore, the PSST or its Executive Committee assign certain tasks to Cyren Call personnel or other PSST advisors (*e.g.*, its legal counsel) in accordance with authorizations from the PSST Board.

3) Who determines and carries out the policy decisions, including preparing and filing applications with the Commission?

   The Board has exclusive authority to determine and carry out PSST policy decisions. Ultimately, those policy decisions will need to conform to the terms of the NSA. Cyren Call is one entity that provides the Board and the Executive Committee with recommendations on policy issues, when requested to do so, as do the PSST's legal counsel and its special regulatory counsel. The PSST's special regulatory counsel prepared the PSST's application to the FCC – which was approved, signed and submitted by the PSST – for the only license it holds or will need to hold.

4) Who is in charge of employment, supervision and dismissal of personnel?

   As noted above, the PSST currently has no staff. The Board, acting either directly or through its Executive Committee, will have exclusive responsibility to employ, supervise and dismiss personnel when it is in a position to do so. Since Cyren Call is an independent contractor, Cyren Call employees are not PSST personnel. The PSST may terminate its letter agreement with Cyren Call at any time.

5) Who is in charge of the payment of financing obligations, including expenses arising out of operating?

The PSST has full responsibility for and is in charge of paying the financial obligations it incurs. All payments are approved in advance by the Executive Committee or the Board, depending on the obligation. Cyren Call does not perform any cash management function for the PSST.

The PSST has received no governmental or other funding that permits it to fulfill the responsibilities associated with its FCC licensee status. A substantial number of those responsibilities require that work be performed or that expenses otherwise will be incurred by the PSST long before it will realize any usage fees from the operation of the shared network – the long-term PSST revenue stream anticipated by the FCC. In the absence of alternative funding sources, the PSST required respondents to its Request for Proposal ("RFP") for an advisor to identify a plan to permit the PSST to finance the work it needed to do. This included the work it needs performed by parties with expertise that the PSST volunteer members do not possess.

Consistent with the commitment it made in its RFP response, Cyren Call investigated a variety of funding options for the PSST. It was unable to locate grants or other governmental sources that were likely to be realistic near-term sources of financing for the PSST. Moreover, because the FCC rules prohibit parties from holding a security interest in a license and because the PSST is a non-profit corporation with no assets or revenue stream anticipated for several years, no conventional lending sources were found. For this reason, the PSST obtained a loan from Cyren Call. Cyren Call in turn is funded – and obtained the money that it made available for loan to the PSST – through private capital sources. The loan arrangements between Cyren Call and the PSST reflect arm's-length, normal lending terms, as detailed in the relevant loan documents.

6) Who receives monies and profits from the operation of the facilities?

The financial arrangement between the PSST and the D Block licensee will not be known until those parties negotiate the NSA. There is no agreement between Cyren Call and the PSST beyond the current letter agreement, which provides for and contemplates services being performed by Cyren Call for the PSST through the time at which a final, mutually acceptable NSA has been agreed to between the PSST and the D Block licensee and approved by the FCC. No agreement currently exists granting Cyren Call any other role, activities or compensation (other than its role as lender and its entitlement to be repaid

> the funds it has advanced to the PSST, all of which are fully detailed in the loan documents). Although Cyren Call advised the PSST in its RFP response, in the letter agreement and in the loan documentation that it wished to explore a longer term role and activities, and appropriate related compensation arrangements, the parties understood that such matters would need, at a minimum, to be harmonized with the terms of the NSA, and that it would be possible to achieve that goal only when a final NSA was in existence. There is no expectation that any future agreement would entitle Cyren Call to network revenue or to any defined percentage of profits. Cyren Call will be paid for services provided to the PSST under whatever terms the parties negotiate in a subsequent agreement, assuming such an agreement is reached.

Additionally, in the Second Report and Order establishing the 700 MHz public-private partnership and the national public safety broadband license, the FCC directed "that no commercial interest may be held in this [PSST] license and that no commercial interest may participate in the management of the [PSST] license."[2] Clearly, no commercial entity holds an interest in the PSST license itself. The members of the Board of Directors of that non-profit, non-stock corporation all are governmental entities or agencies, as required by the FCC. As for participation in management, in the context of the FCC rules relating to qualifying for so-called Designated Entity status for auction purposes, the FCC has expressed concern about management agreements between licensees and third parties wherein the ostensible manager had the ability to exercise sufficient control over the licensee as to direct the licensee's activities and, thereby, the operation of the licensee's system. In those contexts, the FCC has identified the following as a "controlling interest" that must be disclosed:

> Any person who manages the operations of an applicant or licensee pursuant to a management agreement shall be considered to have a controlling interest in such applicant or licensee if such person, or its affiliate, has authority to make decisions or otherwise engage in practices or activities that determine, or significantly influence:
> (1) The nature or types of services offered by such an applicant or licensee;
> (2) The terms upon which such services are offered; or
> (3) The prices charged for such services.[3]

Cyren Call has no management relationship with or management role within the PSST. Like the attorneys, engineers or other parties that are engaged by licensees to provide identified services based on their particular qualifications, any recommendations that Cyren Call might offer the PSST are accepted or rejected based exclusively on the determinations of the PSST Board or its Executive Committee, depending on the specific matter under consideration and consistent, in all cases, with the policies and procedures adopted by the PSST to govern its internal decision making processes. There are no conditions, covenants or other features of Cyren Call's loan to the PSST that would allow Cyren Call to influence those determinations.

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[2] *Second Report and Order,* WT Docket No. 06-150, 22 FCC Rcd 15289 at ¶ 373 (2007).
[3] 47 C.F.R. § 1.2110(c)(ii)(H).

The procedures by which the PSST makes decisions regarding management of its license and all other matters are set out in Article III (Authority and Duties of Directors), Article IV (Authority and Duties of Officers) and Article VIII (Financial Administration) of the PSST's Amended and Restated Bylaws, a copy of which was included in the PSST's application to the FCC for authority to hold the Public Safety Broadband License, which application was granted by the FCC under call sign WQHW226 on November 19, 2007.[4]

If you have any questions or wish to discuss this matter further, please feel free to contact me.

Sincerely,

Lukas, Nace, Gutierrez & Sachs, Chartered

By: Elizabeth R. Sachs

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[4] The PSST's Amended and Restated Bylaws are also available at www.psst.org.

FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON

OFFICE OF
THE CHAIRMAN

The Honorable John D. Dingell
Chairman
Committee on Energy and Commerce
U.S. House of Representatives
2125 Rayburn House Office Building
Washington, D.C. 20515

Dear Chairman Dingell:

Please find enclosed my responses to the post-hearing Questions for the Record from the April 15, 2008 Subcommittee on Telecommunications and the Internet "Oversight of the Federal Communications Commission – the 700 MHz Auction" hearing.

Please contact me if I can be of further assistance.

Sincerely,

Kevin J. Martin
Chairman

Enclosure

Post-Hearing Questions for the Record from Chairman John D. Dingell to FCC Chairman Kevin J. Martin

1. At the hearing, each of the Commissioners expressed some level of concern about the relationship that developed between the Public Safety Spectrum Trust and its advisor, Cyren Call, in the months leading up to the auction. What aspects of the relationship do you find troubling? In your view, is there a role for a for-profit entity in the management of the proposed public-private network?

As the Commission noted in the *Second Report and Order*, the 700 MHz Public/Private Partnership was adopted as a means for promoting the rapid construction and deployment of a nationwide, interoperable broadband public safety network that would serve public safety and homeland security needs.[1] In this respect, the Public Safety Broadband Licensee was given certain responsibilities, primarily intended to ensure that the needs of the public safety community would be met. I did not envision that the Public Safety Broadband Licensee would develop a for-profit entity or for-profit "business" plans.

I recognize there may be a legitimate need by the Public Safety Broadband Licensee for consultants such as accountants, engineers or attorneys, but I do not believe there should be a role for a for-profit entity in the management of the proposed public-private network.

The recently released *Second Further Notice of Proposed Rulemaking* (*Second Further Notice*) seeks comment on "whether the Commission should restrict the Public Safety Broadband Licensee's business relationships pre- and post-auction with commercial entities, and if so, what relationships should and should not be permitted."[2] The *Second Further Notice* additionally seeks comment on the Public Safety Broadband Licensee funding mechanisms, to ensure that no "for-profit" incentives inadvertently influence its priorities:

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[1] *See* Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band, PS Docket No. 06-229, *Order*, 22 FCC Rcd 20453 (2007); *See also* Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, WT Docket No. 06-150, Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, CC Docket No. 94-102, Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones, WT Docket No. 01-309, Biennial Regulatory Review – Amendment of Parts 1, 22, 24, 27, and 90 to Streamline and Harmonize Various Rules Affecting Wireless Radio Services, WT Docket 03-264, Former Nextel Communications, Inc. Upper 700 MHz Guard Band Licenses and Revisions to Part 27 of the Commission's Rules, WT Docket No. 06-169, Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band, PS Docket No. 06-229, Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010, WT Docket No. 96-86, Declaratory Ruling on Reporting Requirement under Commission's Part 1 Anti-Collusion Rule, WT Docket No. 07-166, *Second Report and Order*, 22 FCC Rcd 15289 (2007) (*Second Report and Order*) *recon . pending.*

[2] Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, WT Docket No. 06-150; Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band, *Second Further Notice of Proposed Rulemaking*, PS Docket No. 06-229, FCC 08-128, at ¶ 40 (rel. May 14, 2008) (*Second Further Notice*). Comments on the *Second Further Notice* are due June 20, 2008, and reply comments are due July 7, 2008.

> We do anticipate that the Public Safety Broadband Licensee may contract with attorneys, engineers, accountants, and other similar advisors or service providers to fulfill its responsibilities to represent the interests of the public safety community, as required by the Commission. Under the approach on which we seek comment above, capital or operational funding mechanisms for the Public Safety Broadband Licensee involving private equity firms or other commercial or financial entities would not be permitted, unless they are non-profit entities and are controlled, if at all, by non-profit entities, in order to ensure that the financial considerations of the Public Safety Broadband Licensee remain aligned with serving the public safety community, and that no "for-profit" incentives inadvertently influence the Public Safety Broadband Licensee's priorities. We seek comment on these restrictions. In particular, are the restrictions on financing warranted to ensure that the Public Safety Broadband Licensee is not unduly influenced by for-profit motives or outside commercial influences in carrying out its official functions within the 700 MHz Public/Private Partnership? If so, in what ways might we allow necessary financing while still ensuring the independence of the Public Safety Broadband Licensee? Specifically, should we allow working capital financing from commercial banks and, if so, should we restrict the assets of the Public Safety Broadband Licensee that can be pledged as security for such a loan? Are there other types of loans or alternative funding sources that we should allow the Public Safety Broadband Licensee to employ? How can the Commission establish incentive-compatible rules for the Public Safety Broadband Licensee and parties with which it may have a relationship, such as advisors, contractors, and investors?[3]

2. Please explain the justification or need for a trust to hold the license for public safety's spectrum. Would it be consistent with the Communications Act of 1934 for the Federal Communications Commission to hold the license instead?

There is no requirement for the Public Safety Broadband Licensee to be constituted in the legal form of a "trust." The current Public Safety Broadband Licensee, the "Public Safety Spectrum Trust Corporation," is not legally formed as a "trust," but rather is organized as a non-profit corporation under the laws of the District of Columbia.[4]

The Public Safety Spectrum Trust Corporation was selected as the Public Safety Broadband Licensee based on its application and representations therein, including adherence to the eligibility criteria established in the *Second Report and Order*, including: "[(1)] that no commercial interest may be held in this licensee, and that no commercial interest may participate in the management of the licensee … [; (2)] … that the licensee must be a non-profit organization … [; (3)] … [that the licensee] must be as broadly representative of the public safety radio user community as possible, including the various levels (*e.g.*, state, local, county) and types (*e.g.*, police, fire, rescue) of public safety entities … [; and (4)] … to ensure that the [licensee] is qualified to provide public safety services, an organization applying for the Public Safety Broadband License is required to submit written certifications from a total of at least ten geographically diverse state and local governmental entities, with at least one certification from a state government entity and one from a local government entity."[5] As the Commission explained in the *Second Report and Order*, "[o]ur goal in establishing these criteria [was] to ensure that the Public Safety Broadband Licensee focuses exclusively on the needs of public safety entities that stand to benefit from the interoperable broadband network."[6] The Public Safety Spectrum Trust Corporation was the only applicant for the Public Safety Broadband License.

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[3] *Second Further Notice* at ¶ 41.

[4] *See* Application of the Public Safety Spectrum Trust Corporation to Be the 700 MHz Public Safety Broadband Licensee (filed Oct. 10, 2007).

It does not appear that the Commission would be authorized to hold the 700 MHz Public Safety Broadband License. Such a licensing scheme would appear to be inconsistent with the requirements of Section 337 of the Communications Act.[7] Under the Section 337(f)(1) definition of "public safety services," the services will not qualify as public safety services unless they are provided either by a "State or local government entit[y]" or by a "nongovernmental organization" that has received authorization from a governmental entity whose primary mission is the provision of public safety services.[8] Since the FCC does not fit within either category, any services provided by the FCC as a licensee would fail to qualify as a public safety service.

3a. Some have suggested that the Commission should simply auction the 10 MHz D Block free and clear of any conditions and use the proceeds of that auction to fund public safety interoperability efforts. Setting side the fact that such a proposal would require congressional action, if the Commission were to pursue such a plan, would the Commission need to re-configure the public safety spectrum to address interference concerns? Would guard bands be necessary, and if so, would the guard bands take away from spectrum that has already been allocated to public safety or from spectrum that is part of the D Block?

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[5] *Second Report and Order* at 15421-22 ¶ 373. As we further observed with respect to the fourth criterion, "[g]iven the nature of the license at issue here – a nationwide license that will support an interoperable network for use by all public safety entities across the country – we believe that applicants for the Public Safety Broadband License should be able to demonstrate support from a wide range of public safety entities across the country. In particular, authorizations from a broad sample of the public safety community for which the service is intended will better reflect the fact that the mission of the Public Safety Broadband Licensee derives from the primary public safety mission of a nationwide array of governmental entities." *Id.* at n.802.

[6] *Id.* at ¶ 373.

[7] 47 U.S.C. § 337.

[8] 47 U.S.C. § 337(f)(1)(B).

There are a number of possible measures the Commission can adopt to address interference concerns among adjacent band licensees. Such measures sometimes include the adoption in our rules of a guard band, but interference can also be addressed by adopting minimal power limits, strict out-of-band emission (OOBE) limits, and notification and/or coordination requirements.

For the 700 MHz spectrum, the Commission has already adopted certain measures to address possible interference concerns between the 700 MHz commercial licensees and the public safety licensees in the public safety broadband spectrum – measures that by their terms would apply to the D Block licensee if the Commission does not require the public/private partnership. For example, the Commission's rules require all Upper 700 MHz Band licensees, including the D Block, upon request from a public safety entity, to provide to that entity information about the location and parameters of any stations they plan to activate in the public safety entity's area of operation, and upon request by an Upper 700 MHz licensee, public safety entities must provide information to the licensee about the operating parameters of their radio systems.[9]

The Commission has also adopted rules generally requiring Upper 700 MHz licensees to provide public safety licensees, including the Public Safety Broadband Licensee, special protection against "out-of-band-emission" interference. These "out-of-band-emission" limits are stricter than those ordinarily required of Commercial Mobile Radio Service (CMRS) licensees.

The Commission has not made a determination at this time whether measures of this type will need to be imposed on D block licensee(s) with respect to the public safety broadband operations in the event that we do not maintain the public/private partnership. We have asked questions on this possibility in the *Second Further Notice* as well as on any other measures we should adopt to adequately protect public safety broadband communications from interference from D Block operations.[10]

3b. How much money does the Commission estimate that a reconfigured D Block would obtain at auction?

The Commission assigns licenses by competitive bidding in part because spectrum licenses are largely unique items, and well-established market prices do not exist. However, past auction results may provide a reasonable estimate of future auction proceeds generated by the Commission. Of course, the accuracy of estimates based on past auctions is limited by the extent to which the future licenses are comparable to past licenses, and whether competitive conditions are similar.

The Commission previously estimated the market value of 700 MHz licenses by looking to the results of the auction for AWS-1 licenses.[11] With respect to the Upper 700 MHz D

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[9] *See* 47 C.F.R. § 27.70.

[10] *See Second Further Notice* at ¶ 200.

[11] *See Second Report and Order*, 22 FCC Rcd at 15399-15401 ¶¶ 300-305.

Block, the Commission used the AWS-1 auction results to estimate that a bidder likely would be willing to pay $1.7 billion for the 10 MHz Upper 700 MHz D Block free and clear of any public/private partnership conditions. Taking into account the requirements created by the public/private partnership conditions, the Commission then proposed a reserve price of $1.33 billion for the nationwide D Block license.

3c. How much money does the Commission estimate is needed to build a nationwide interoperable broadband network on public safety's spectrum? Please include any economic analyses upon which you base your answer.

In February 2007, Cyren Call estimated a cost of "approximately" $20 billion to build an IP-based nationwide public safety network, whether operating solely on 12 megahertz of public safety spectrum or on 30 megahertz of public safety spectrum.[12] Cyren Call calculated that capital expenditures for the network over 10 years would be as much as $10.7 billion, or as little as $3.1 billion "with aggressive assumptions about network infrastructure sharing."[13] In its later May 2007 comments in response to the *Further Notice of Proposed Rulemaking* in which the Commission sought comment on a public/private partnership, Cyren Call estimated that it would take approximately $18 billion in capital expenditures over ten years to construct a network operating on both public safety and commercial spectrum.[14] In a follow-up June 2007 *ex parte* addressing the costs of constructing a joint public/private network, Cyren Call provided a separate breakout estimate of just over $5 billion for the capital costs incurred specifically to meet the needs of public safety.[15]

The cost of any nationwide interoperable broadband network, however, will depend on various key parameters of the network. The *Second Further Notice* asked commenters to provide estimates of the construction costs, both for the network as previously adopted and for proposed revisions. We also intend to hold an *en banc* hearing at which this issue can be discussed publicly by public safety and commercial participants.

4. During the hearing, you testified that the Commission had not conducted its own independent analysis of the economic viability of the public-private partnership for the D Block. Many entities have offered various suggestions with respect to the re-auctioning of the D Block. Does the Commission need independent economic analyses to determine which proposals are feasible? Would such analyses allow the Commission to make a more informed decision about how to proceed with the re-auction of the D Block?

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[12] Cyren Call Comments, PS Docket No. 96-86, filed Feb. 26, 2007 (Cyren Call Feb. Comment), at 17.

[13] *Id.*, App. 2 at 3.

[14] Cyren Call *ex parte*, WT Docket No. 06-150, filed May 11, 2007 (Cyren Call May *ex parte*), at 3.

[15] *See* Cyren Call *ex parte*, WT Docket No. 06-150, filed June 26, 2007 (Cyren Call June *ex parte*), at 8

In the *Second Further Notice*, we asked commenters that offer technical proposals for the nationwide broadband network to discuss the economic viability of such proposals.[16] We also asked more specific questions to obtain information relevant to a determination of the economic viability of the shared wireless broadband network, including questions regarding (1) the costs of construction,[17] (2) measures to reduce such cost, including whether the commercial provider can use publicly-owned or leased property,[18] and (3) payment and funding sources for the construction and ongoing operation of the network.[19] In addition, we sought comment on a detailed Technical Framework that we hope will encourage focused and specific comments, including comments on cost and economic feasibility.

5. **The Commission applies the so-called "spectrum screen" to proposed mergers and acquisitions as part of its analysis of whether proposed transactions are in the public interest. The Commission does not apply the spectrum screen if a carrier acquires spectrum at auction. Does this asymmetrical application of the spectrum screen adequately protect consumers and promote the public interest? Should the Commission re-examine its application of the spectrum screen? Several reports indicate that both Verizon and AT&T are over the spectrum screen in a number of markets. Should the Commission take a closer look at those markets to ensure that consumers are not harmed by this increased spectrum consolidation?**

After the sunset of the hard cap on CMRS spectrum aggregation, the Commission moved to case-by-case evaluation of the competitive effects of proposed transfers or assignments of wireless licenses. Our approach has three main components: (i) identifying the relevant markets; (ii) performing an "initial screen" (currently set at 95 MHz) designed to identify those markets where harm to the public interest is possible and thus further in-depth analysis is required; and (iii) undertaking the necessary in-depth analysis of markets identified by the initial screen to determine if harm is in fact likely and how it should be remedied.

Regarding reports that both Verizon and AT&T are over the spectrum screen in a number of markets, I have directed staff to take a closer look at those markets to ensure that consumers are not harmed.

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[16] *See Second Further Notice* at ¶¶ 66, 72.

[17] *See* Question 3C, *supra.*

[18] *See Second Further Notice* at ¶ 67.

[19] *See Second Further Notice* at ¶¶ 68, 127-134.

Questions for the Record from the Honorable John D. Dingell, Chairman, U.S. House of Representatives Committee on Energy and Commerce to Commissioner Michael J. Copps, Federal Communications Commission

Oversight of the Federal Communications Commission: the 700 MHz Auction
April 15, 2008

Submitted: May 30, 2008

1. **At the hearing, each of the Commissioners expressed some level of concern about the relationship that developed between the Public Safety Spectrum Trust and its advisor, Cyren Call, in the months leading up to the auction. What aspects of the relationship do you find troubling? In your view, is there a role for a for-profit entity in the management of the proposed public-private network?**

My concern stems from the fact that the only income source for the Public Safety Spectrum Trust (PSST) appears to be a loan from its advisor, Cyren Call. This financial arrangement arguably inverts the standard client-advisor relationship and I believe makes it difficult, if not impossible, for the PSST to exercise the appropriate level of control over Cyren Call.

The Commission granted a nationwide public safety license to the PSST because it is broadly representative of the public safety community. Its sole responsibility is to vigorously represent the interests of the nation's first responders. In order to achieve this goal, the PSST must have the ability to hire technical and financial experts, including engineers, economists, and lawyers. But in the final analysis, these advisors should remain subordinate to the PSST. For example, the PSST must retain the authority to reject technical or financial advice, or even to terminate an advisor's contract if the PSST loses confidence in that entity. The financial relationship between the PSST and Cyren Call makes it difficult if not impossible for the PSST to exercise either of these options without jeopardizing its ability to meet day-to-day expenses. So, while I have no reason to question the intentions of any member of the PSST or of Cyren Call, I conclude that it is impossible for the PSST to retain the necessary level of control over a for-profit entity that is simultaneously its advisor and principal source of funding.

At the same time, I do recognize that the PSST faced substantial challenges in raising funds to support its operations over the past year and do not want to be interpreted as criticizing the Trust's motives in accepting short-term financing from Cyren Call. The challenge remains to secure an appropriate source of funding for the PSST as this process moves forward. That is why I voted to include questions in the recently-released NPRM highlighting this issue and seeking specific comment on the possibility of awarding funding from sources such as the Universal Service or Telecommunications Development Fund. I also understand there is legislative activity from the Committee on this issue, sponsored by Representative Harman.

As for the role of a for-profit entity in the management of the proposed network, I think that the PSST should have flexibility to hire experts, but it should do so via fee arrangements that do not compromise in any way the interests of public safety or inject inappropriate commercial concerns into the PSST's ultimate deliberations. The fundamental and guiding purpose of the PSST must be to serve public safety, not to earn a profit for any company. Accordingly, the PSST must not be permitted to enter into fee arrangements that could create inappropriate incentives for its advisors. That is why I would be far more comfortable with hourly billing, a flat fee, or similar arrangements, rather than a compensation model based on a percentage of gross receipts, user fees, or some related measure.

2. **Please explain the justification or need for a trust to hold the license for public safety's spectrum. Would it be consistent with the Communications Act of 1934 for the Federal Communications Commission to hold the license instead?**

As I have stated above, the role of the PSST is to manage its valuable spectrum asset in the best interests of public safety. I believe a non-profit, incorporated trust is one appropriate legal structure for accomplishing this goal. It is, for example, how many universities, museums, foundations, and other important non-profit institutions have succeeded in managing valuable assets, for the common good, over long periods of time.

I am certainly interested, however, in exploring alternative legal structures that might better serve the interests of public safety. As I testified before your Committee last month, I think the FCC must take a leading role in this process—both by developing detailed rules for the public-private partnership in advance of any future auction and by exercising strong oversight authority over the PSST on an ongoing basis.

I am concerned, however, that an arrangement wherein the FCC holds the license directly could actually impair the FCC's ability to discharge its oversight responsibilities and might also be inconsistent with the FCC's statutory duty to "provide for the use of ... channels [of radio transmission] . . . by persons for limited periods of time, under licenses granted by Federal authority."[1] In essence, it would require the FCC to police itself (with appropriate oversight from Congress as well, of course) in its stewardship of a license. I believe that assigning responsibility for decision-making to a board of public safety experts, combined with vigorous FCC and Congressional oversight, is a more workable model. But it will take serious commitment from the FCC to carefully watch the decisions—both administrative and substantive—of the PSST.

3. **Some have suggested that the Commission should simply auction the 10 MHz D Block free any clear of any conditions and use the proceeds of that auction to fund public safety interoperability efforts. Setting aside the fact that such**

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[1] 47 U.S.C. § 301; *see also id.* at § 337(f)(1)(B) (defining "public safety services" as state or local governmental entities or non-governmental entities authorized by a governmental entity).

a proposal would require Congressional action, if the Commission were to pursue such a plan, would the Commission need to re-configure the public safety spectrum to address interference concerns? Would guard bands be necessary, and if so, would the guard bands take away from spectrum that has already been allocated to public safety or from spectrum that is part of the D Block? How much money does the Commission estimate that the reconfigured D Block would obtain at auction? How much money does the Commission estimate is needed to build a nationwide interoperable broadband network on public safety's spectrum? Please include any economic analyses upon which you base your answer.

The band plan adopted by the Commission last summer was designed under the assumption that the D-Block would be used in conjunction with the broadband public safety spectrum as part of a shared public-private network. The assumption that these two spectrum blocks would be used to support an integrated network affected the technical rules for the spectrum blocks (*e.g.*, out-of-band emissions) as well as the position of the guard bands between commercial and public safety spectrum ("external" guard bands) and between the narrowband and broadband public safety spectrum ("internal" guard bands). If the Commission were to auction the D Block free and clear of the public-private sharing concept, it would certainly be appropriate and necessary for the Commission to revisit the technical rules that apply to the D Block. I also believe it would be appropriate to seriously consider revising the existing external and internal guard bands in order to optimize the use of the spectrum under a different band plan.

The amount of money that a reconfigured D Block could bring at auction will depend substantially upon the economic climate at the time of the auction; the existing spectrum holdings of participating bidders; the technology choices of licensees of adjacent spectrum; as well the service rules that apply to the spectrum, including build out requirements, geographic license size, and any changes to technical rules and guard bands along the lines discussed above. With these caveats in mind, one reasonable (albeit extremely rough) estimation method is to extrapolate on a per-MHz basis based on the selling prices of the paired A, B, and C Blocks in the 700 MHz spectrum band.[2] This yields an estimate of between $2.2 billion and $7.6 billion for a 10 MHz block of spectrum. However, I do want to emphasize that this is only a very rough estimate—the history of attempts to predict spectrum auction results demonstrates that even the most sophisticated *ex ante* estimates (such as the Congressional Budget Office's scoring of the most recent 700 MHz auction) are routinely off by as much as 100%.

The cost of building a nationwide interoperable broadband network is also highly dependent upon the particular specifications used in designing and building that network. For example, as the Commission's recently released Second Further Notice of Proposed Rulemaking in the 700 MHz docket indicates, even small changes in the geographic build out requirement (such as the reduction from 99.3% to 99%), can have enormous effects on the cost of building such a network (as much as $1 billion).[3] Similarly, the range of cost estimates in the record of this proceeding for building a nationwide interoperable network includes figures (based on different network specifications and modeling assumptions) of $8.1 billion,[4] over $15 billion,[5] $17.1 billion,[6] and $20 billion.[7]

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[2] The 12 MHz A Block sold for $3.96 billion ($330 million/MHz); the 12 MHz B Block sold for $9.14 billion ($762 million/MHz); and the 22 MHz C Block sold for $4.75 billion ($216 million/MHz).

I believe the wide variation between these estimates just underscores the importance of working out the details of network specifications in advance of any future auction. As I testified before the Committee last month, I think the FCC needs to make it a top priority to hire or contract for engineers and economists who can clarify the cost of technical different specifications. This will then allow the Commission—in close consultation with public safety representative, potential bidders, Congress, and other interested parties—to decide upon the right set of technical specifications for the proposed public-private partnership.

4. **During the hearing, Chairman Martin testified that the Commission had not conducted its own independent analysis of the economic viability of the public-private economic analyses to determine which proposals are feasible: Would such analyses allow the Commission to make a more informed decision about how to proceed with the re-auction of the D Block?**

I believe that such analyses are absolutely essential if the Commission is going to develop a solution that serves the pressing needs of public safety users. Even if we roll up our sleeves and dedicate ourselves to coming up with realistic network specifications, the truth is that we still are not assured of coming up with a workable solution. At the same time, I am 100% certain that if the Commission does not avail itself of the best technical and economic advice, the needs of public safety will assuredly continue to go unmet.

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[3] *Service Rules for the 698-746, 747-762 and 777-792 MHz Bands*, Second Further Notice of Proposed Rulemaking, WT Docket No. 06-150 at para. 92 n.113 (May 14, 2008).

[4] *Service Rules for the 698-746, 747-762 and 777-792 MHz Bands*, Comments of Access Spectrum, LLC et al at, Declaration of Stagg Newman at 10, WT Docket No. 06-150 (Sept. 29, 2006) ($8.4 billion for 90% geographic coverage).

[5] *Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band*, Comments of Frontline Wireless at 11 n.17, PS Docket No. 06-229, (February 26, 2007) (citing testimony of Karen Evans, Administrator for Electronic Government and Information Technology, Office of Management and Budget, Before the Committee on Government Reform, U.S. House of Representatives, Nov. 6, 2003, stating that "[c]ost estimates [of solving the nation's interoperability problem] are commonly estimated at over $15B and do not always include the costs of retraining, new infrastructure, or essential maintenance of new systems." *available at*: http://www.whitehouse.gov/omb/legislative/testimony/evans/print/031106_evans.html).

[6] *Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band*, Letter from Elizabeth Sachs, Counsel to Cyren Call, to Marlene H. Dortch, Secretary, FCC at 9, PS Docket No. 06-229 (June 26, 2009) (estimating capital expenditure for a public/private shared network).

[7] *Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band*, Comments of Cyren Call at 17, PS Docket No. 06-229 (Feb. 26, 2007) ("Cyren estimates that it will cost approximately Twenty Billion Dollars to build an IP-based, next generation, nationwide, broadband public safety system that satisfies the demanding specifications of emergency response providers.").

Now that we are not facing a hard-and-fast auction deadline, the right course is to work out the difficult questions in advance—thus providing much needed certainty and predictability to public safety, potential bidders, their investors, the public, the FCC and Congress. This will take input from engineers, economists, and lawyers—working for the FCC, public safety, and industry. If I do not think that the FCC has developed workable and specific network specifications before a future auction, I will not hesitate to say that we need to go back to the drawing board and get it right before proceeding any further.

5. **The Commission applies the so-called "spectrum screen" to proposed mergers and acquisitions as part of its analysis of whether proposed transactions are in the public interest. The Commission does not apply the spectrum screen if a carrier acquires spectrum at auction. Does this asymmetrical application of the spectrum screen adequately protect consumers and promote the public interest? Should the Commission re-examine its application of the spectrum screen? Several reports indicate that both Verizon and AT&T are over the spectrum screen limit in a number of markets. Should the Commission take a closer look at those markets to ensure that the consumers are not harmed by this increased spectrum consolidation?**

I have long believed the Commission made a tremendous mistake in eliminating spectrum caps, which I think are essential to preventing excessive concentration of licenses and to ensuring competition in the wireless marketplace. Our policy of applying a less rigorous "spectrum screen" represents a substantial step backwards in my view, and I recently dissented from the Commission's decision in the AT&T-Dobson acquisition to increase the screen to 95 MHz based upon the existence of AWS and 700 MHz spectrum which is not yet available for use by carriers. The Commission's policy of applying the screen asymmetrically (only to mergers and acquisitions, but not auctions) makes matters even worse and has no justification as a matter of competition policy. I certainly hope the Commission will take another look at its decisions on this topic and seriously consider reforms that can encourage a more robustly competitive wireless marketplace and protect the interests of consumers.

I am also deeply concerned by the fact that the nation's leading wireless carriers exceed the spectrum screen in a number of markets. I would wholeheartedly support the Commission taking a closer look at how this degree of consolidation affects consumers and the wireless choices available to them.

Questions for the Record from Chairman John Dingell
to Commissioner Deborah Taylor Tate
April 15, 2008 Hearing

"Oversight of the Federal Communications Commission – the 700 MHz Auction"

1. At the hearing, each of the Commissioners expressed some level of concern about the relationship that developed between the Public Safety Spectrum Trust and its advisor, Cyren Call, in the months leading up to the auction. What aspects of the relationship do you find troubling? In your view, is there a role for a for-profit entity in the management of the proposed public-private network?

The Commission's 700 MHz *Second Report and Order*, adopted July 31, 2007, established a Public Safety Broadband Licensee (PSBL), along with rules enabling a public/private partnership between the PSBL and a commercial licensee in the 700 MHz D Block.[1] On November 19, 2007, the Commission chose the Public Safety Spectrum Trust (PSST), a non-profit corporation, to be the PSBL. The *Second Report and Order* was clear about a number of criteria the PSBL must meet: (1) no commercial party may have an interest in the PSBL; (2) the PSBL must be a non-profit organization; (3) the PSBL must be broadly representative of the public safety radio user community; and (4) the PSBL must have certification to use the 700 MHz public safety spectrum from at least ten state and local entities from diverse geographic areas.[2]

I am concerned about the potential for a conflict of interest if the advisors to the PSBL have a fiduciary interest in this licensee. I had the expectation that the PSBL would be a truly non-profit entity. While there may be a role for a for-profit entity to assist the PSBL in the management of the proposed public-private network, the rules governing the relationship between the PSBL and any for-profit entity, including its advisors, must be more clearly specified by the Commission.

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[1] *See* Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, WT Docket No. 06-150, Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, CC Docket No. 94-102, Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones, WT Docket No. 01-309, Biennial Regulatory Review – Amendment of Parts 1, 22, 24, 27, and 90 to Streamline and Harmonize Various Rules Affecting Wireless Radio Services, WT Docket 03-264, Former Nextel Communications, Inc. Upper 700 MHz Guard Band Licenses and Revisions to Part 27 of the Commission's Rules, WT Docket No. 06-169, Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band, PS Docket No. 06-229, Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010, WT Docket No. 96-86, Declaratory Ruling on Reporting Requirement under Commission's Part 1 Anti-Collusion Rule, WT Docket No. 07-166, *Second Report and Order*, 22 FCC Rcd 15289,15419-479, ¶¶ 365-553 (2007) (*Second Report and Order*) *recon. pending.*

[2] *See Second Report and Order*, 22 FCC Rcd 15421-22.

The Commission recently released the 700 MHz *Second Further Notice* to address these key issues.[3] In particular, we sought comment on "whether the Commission should restrict the Public Safety Broadband Licensee's business relationship pre- and post-auction with commercial entities, and if so, what relationships should and should not be permitted."[4] We also sought comment on the types of funding mechanisms that should be permitted for the PSBL and, more generally, on what might be the best type of funding mechanism for this licensee.[5]

2. Please explain the justification or need for a trust to hold the license for public safety's spectrum. Would it be consistent with the Communications Act of 1934 for the Federal Communications Commission to hold the license instead?

As described above, in the *Second Report and Order*, the Commission adopted rules allowing for a public/private partnership, with a single nationwide license for the public safety spectrum designated for broadband service, which would be held by the PSBL.[6] While this order described the various requirements of the PSBL, including broad representation of the public safety community,[7] it did not stipulate that the license must be held within a "trust."

Section 337 of the Communications Act of 1934, which was added by the Balanced Budget Act of 1997, directs the Commission to assign licenses in the 700 MHz band to public safety users.[8] With regard to who may hold a license, Section 301 of the Communications Act of 1934 states: "No person shall use or operate any apparatus for the transmission of energy or communications or signals by radio ... except under and in accordance with this Act and with a license in that behalf granted under the provisions of this Act."[9] This rule applies to commercial, private, as well as public safety users of the spectrum.[10] To my knowledge, the Commission has never held a license on behalf of public safety or any other type of spectrum user. In addition, with regard to Federal users of the spectrum, no Federal entity may use the spectrum without proper authorization by the NTIA.[11]

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[3] *See* Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, WT Docket No. 06-150, Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band, PS Docket No. 06-229, *Second Further Notice of Proposed Rulemaking*, FCC 08-128 (rel. May 14, 2008) (*Second Further Notice*).

[4] *Second Further Notice*, ¶ 40.

[5] *Second Further Notice*, ¶¶ 41-42.

[6] *Second Report and Order*, 22 FCC Rcd at 15419-479, ¶¶ 365-553.

[7] *Second Report and Order*, 22 FCC Rcd at 15421-25 ¶¶ 373-375.

[8] *See* Balanced Budget Act of 1997, Pub. L. No. 105-33, 111 Stat. 251 § 3004 (1997) (adding new § 337 of the Communications Act).

[9] 47 U.S.C. 301.

[10] Part 90 of the Commission's rules generally address rules for licenses held by public safety entities. The Public Safety Broadband License, for example, is held pursuant to Part 90 of the Commission's rules.

3. Some have suggested that the Commission should simply auction the 10 MHz D Block free and clear of any conditions and use the proceeds of that auction to fund public safety interoperability efforts. Setting aside the fact that such a proposal would require congressional action, if the Commission were to pursue such a plan, would the Commission need to re-configure the public safety spectrum to address interference concerns? Would guard bands be necessary, and if so, would the guard bands take away from spectrum that has already been allocated to public safety or from the spectrum that is part of the D Block? How much money does the Commission estimate is needed to build a nationwide interoperable broadband network on public safety's spectrum? Please include any economic analyses upon which you base your answer?

In the Balanced Budget Act of 1997, Congress directed the Commission to allocate 24 megahertz of spectrum in the Upper 700 MHz band for public safety services and 36 megahertz of spectrum in this band for commercial use.[12] In response to this direction, the Commission adopted orders allocating to public safety the 24 megahertz of spectrum covering television channels 63, 64, 68 and 69 (764-776 MHz, and 794-806 MHz). The Commission allocated the remaining spectrum in the Upper 700 MHz band – covering television channels 60, 61, 62, 65, 66, and 67 – to commercial use and designated that the portion of this commercial spectrum that was immediately adjacent to the public safety spectrum (762-764 MHz, 776-777 MHz, and 792-794 MHz) would be used for guard bands.[13] In so doing, the Commission decided that public safety would be able to use its entire 24 megahertz without having to dedicate any of this spectrum to guard bands to protect against interference from commercial operations in adjacent bands. With this spectrum, and not counting the 10 megahertz of the D Block, public safety would have an average of approximately 97 megahertz of spectrum in most markets.

If the Commission were to auction the D Block with no public/private partnership and allow commercial operations in this spectrum, I would support a requirement that this licensee provide interference protection to public safety users in the adjacent band in order to ensure public safety's rights to access the full 24 megahertz of spectrum that Congress has allocated to it. The Commission routinely establishes rules to protect commercial and private licensees from interference, and we would do no less for public safety.

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[11] Nat'l Telecomm. & Info. Admin., Manual of Regulations and Procedures for Federal Radio Frequency Management 7 (2008), available at http://www.ntia.doc.gov/osmhome/redbook/7.pdf.

[12] *See* Balanced Budget Act of 1997, Pub. L. No. 105-33, 111 Stat. 251 § 3004 (1997) (adding new § 337 of the Communications Act).

[13] *See* Reallocation of Television Channels 60-69, the 746-806 MHz Band, ET Docket No. 97-157, *Report and Order*, 12 FCC Rcd 22953 (1998), *recon.* 13 FCC Rcd 21578 (1998); Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission's Rules, WT Docket No. 99-168, *First Report and Order*, 15 FCC Rcd 476 (2000).

The cost of building a nationwide interoperable broadband network is an important question, and I have spent a great deal of time talking to public safety communications experts, as well as network providers, to better understand the many issues it raises. Certainly, existing network operators have knowledge of their specific networks and can provide valuable insights. Also, the Commission should utilize the real-world experience of public safety providers that have already established interoperable systems, such as a project along the I-19 corridor in Arizona and in New Orleans and surrounding parishes.

There is value in having cost estimates submitted in the record, both to encourage discussion among the other commenters and to allow the Commission's engineers, economists and other staff to evaluate these types of analyses. Two commenters estimated that the construction costs alone – not counting ongoing operations costs – could exceed $15 billion for a new, nationwide network.[14]

In an effort to generate more comment on this issue, the *Second Further Notice* also asks parties to provide estimates of the costs of building a nationwide interoperable broadband network under a variety of build-out scenarios, and more generally asks for estimates of the costs of building and operating such a network to the requirements outlined in the *Second Report and Order*.[15]

4. During the hearing, Chairman Martin testified that the Commission had not conducted its own independent analysis of the economic viability of the public-private partnership for the D Block. Does the Commission need independent economic analyses to determine which proposals are feasible? Would such analyses allow the Commission to make a more informed decision about how to proceed with the reauction of the D Block?

Yes. The Commission always can benefit from independent analyses. Therefore, in the *Second Further Notice*, the Commission sought comment on the costs of a public/private partnership under various build-out obligations for the D Block licensee.[16] The *Second Further Notice* also sought comment on potential construction costs based on an estimate that was filed in the original docket. I look forward to reviewing the comments on this matter.

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[14] *See, e.g.,* Comments of Cyren Call Communications Corporation, WT Docket No. 06-150, May 23, 2007, at 3; Comments of Frontline, LLC, WT Docket No. 06-150, May 23, 2007, at 32.

[15] *See Second Further Notice* at ¶¶ 90-93.

[16] *See Second Further Notice* at ¶¶ 90-93.

5. The Commission applies the so-called "spectrum screen" to proposed mergers and acquisitions as part of its analysis of whether proposed transactions are in the public interest. The Commission does not apply the spectrum screen if a carrier acquires spectrum at auction. Does this asymmetrical application of the spectrum screen adequately protect consumers and promote the public interest? Should the Commission re-examine its application of the spectrum screen? Several reports indicate that both Verizon and AT&T are over the spectrum screen limit in a number of markets. Should the Commission take a closer look at those markets to ensure that consumers are not harmed by this increased spectrum consolidation?

As you correctly point out, the spectrum screen is not applied to spectrum acquired at auction. For purposes of competitive review, the Commission generally distinguishes between spectrum acquired at auction – which *increases* the potential for new providers to serve a market or for existing providers to offer new services – and spectrum acquired through merger or secondary market transactions – which potentially *decreases* the number of competitors in a market. In addition, while the amount of spectrum held in a market may indicate whether further competitive review is warranted, such review includes additional factors, including an analysis of the market share of each provider in that market.

Furthermore, in the *Second Further Notice* adopted earlier this month, we seek comment "on whether the Commission should apply the spectrum aggregation screen used for wireless transaction to the D Block."[17] We also ask for comment on whether the Commission should preclude certain parties from acquiring a D Block license at auction, including any party that "already has sufficient spectrum access, however that access is defined[.]"[18]

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[17] *See Second Further Notice*, ¶ 161.

[18] *See Second Further Notice*, ¶ 158.

Response of Jonathan S. Adelstein
Commissioner, Federal Communications Commission
Questions for Federal Communications Commission Members from
The Hon. John D. Dingell, Chairman,
House Committee on Energy and Commerce

The Honorable John D. Dingell

Question 1. At the hearing, each of the Commissioners expressed some level of concern about the relationship that developed between the Public Safety Spectrum Trust and its advisor, Cyren Call, in the months leading up to the auction. What aspects of the relationship do you find troubling? In your view, is there a role for a for-profit entity in the management of the proposed public-private network?

The implementation of a shared commercial and public safety network has presented a myriad of complex and novel issues. I have urged that one of the many critical questions that should be addressed in our Second Further Notice[1] is how to better define the role of the Public Safety Trust and its interplay with the commercial entity. As part of our implementation of the 700 MHz order, we required that no commercial interest may be held in the Public Safety Broadband Licensee, that no commercial interest may participate in the management of the licensee, and that the licensee must be a non-profit organization.[2] The rationale behind adopting these criteria was to ensure that the Public Safety Licensee has as its sole focus the needs of the public safety community operating on the interoperable broadband network. It is particularly troubling if there is a commercial entity that participates in the management of the licensee that may have the influence and incentive to redirect the goals and obligations of the Public Safety Trust to align with its own commercial interests.

In light of these concerns and the expressed need for clarity on these issues, we now have sought comment on how to better clarify the "no commercial interest"/ "non-profit" requirement. Just as critical, we have sought the public's input on whether to clarify that the Public Safety Broadband Licensee may not obtain debt or equity financing from any source, unless that source is also a non-profit entity. Finally, we have asked interested parties to address as a general matter, whether and how the Commission should place limitations on the Public Safety Broadband Licensee's business relationships with commercial entities both before and after the auction.[3]

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[1] *See* Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, WT Docket No. 06-150, Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band, PS Docket No. 06-229, *Second Further Notice of Proposed Rulemaking*, FCC 08-128 (rel. May 14, 2008) (*Second Further Notice*).

[2] *See* Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, WT Docket No. 06-150, Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, CC Docket No. 94-102, Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones, WT Docket No. 01-309, Biennial Regulatory Review – Amendment of Parts 1, 22, 24, 27, and 90 to Streamline and Harmonize Various Rules Affecting Wireless Radio Services, WT Docket 03-264, Former Nextel Communications, Inc. Upper 700 MHz Guard Band Licenses and Revisions to Part 27 of the Commission's Rules, WT Docket No. 06-169, Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band, PS Docket No. 06-229, Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010, WT Docket No. 96-86, Declaratory Ruling on Reporting Requirement under Commission's Part 1 Anti-Collusion Rule, WT Docket No. 07-166, *Second Report and Order*, 22 FCC Rcd 15289, 15421 ¶ 373 (2007) (*Second Report and Order*) *recon. pending*.

As we look at these important issues, we must recognize that it may be necessary for the Public Safety Broadband Licensee to contract with various entities and advisors in order to actually accomplish the highly complex and technical aspects of structuring and implementing a nationwide interoperable network for public safety. At the same time, it will be important as we move forward to ensure that the management of the Public Safety Trust is not aligned with any for-profit motives or commercial influences.

Question 2. Please explain the justification or need for a trust to hold the license for public safety's spectrum. Would it be consistent with the Communications Act of 1934 for the Federal Communications Commission to hold the license instead?

Section 337 of the Communications Act of 1934 (the Act)[4], as amended, sets forth the Commission's obligations regarding the allocation and assignment of public safety services licenses. Pursuant to Section 337 (a)(1), the Commission must allocate 24 megahertz of spectrum in the upper 700 MHz band for "public safety services," defined in Section 337 (f)(1)(B) as services "the sole or principal purpose of which is to protect the safety of life, health, or property; that are provided by State or local government entities; or by nongovernmental organizations that are authorized by a governmental entity whose primary mission is the provision of such services; and that are not made commercially available to the public by the provider."[5] In light of this statutory provision, it would appear to be inconsistent with the Act's requirements to have the Commission hold the license for the public safety spectrum given that the agency is neither a State or local government, nor a non-governmental organization. The Commission recognized the unique requirements of the public safety licensee and took care in establishing the public-private partnership model to ensure that the Public Safety Broadband Licensee as granted to the Public Safety Spectrum Trust, was qualified to provide public safety services consistent with the statute.[6] Beyond this apparent statutory necessity, the Commission has expressed its preference to assign this spectrum to a single licensee so as to maximize public safety access to interoperable, broadband spectrum in the 700 MHz band.

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[3] *See Second Further Notice* at ¶ 40.

[4] 47 U.S.C. § 337.

[5] 47 U.S.C. § 337(f)(1)(B).

[6] *See Second Report and Order*, 22 FCC Rcd at 15421 ¶ 373 & n.802.

Question 3. Some have suggested that the Commission should simply auction the 10 MHz D Block free and clear of any conditions and use the proceeds of that auction to fund public safety interoperability efforts. Setting aside the fact that such a proposal would require congressional action, if the Commission were to pursue such a plan, would the Commission need to re-configure the public safety spectrum to address interference concerns? Would guard bands be necessary, and if so, would the guard bands take away from spectrum that has already been allocated to public safety or from spectrum that is part of the D Block? How much money does the Commission estimate that a reconfigured D Block would obtain at auction? How much money does the Commission estimate is needed to build a nationwide interoperable broadband network on public safety's spectrum? Please include any economic analyses upon which you base your answer.

The current band configuration for the 700 MHz D block contemplates proposed use for broadband communications on both the public safety spectrum as well as on the commercial allocation (D Block). As such, it appears unlikely that the Commission would need to re-configure the public safety spectrum should the Commission re-auction the D block without conditions. The Commission would, however, need to assess the imposition of out of band emission limits for interference protection where there is no shared infrastructure, though it is not likely that guard bands would be necessary in this scenario.

In looking at the value of an unencumbered D Block spectrum sale, it is important to recognize that several variables impact such a valuation, such as whether the block is auctioned off in CMAs, REAGs or on a nationwide basis. Indeed, there were notable variations in the average price per MHz/pop across the various blocks for the 700 MHz spectrum in light of the specific configuration details, including conditions. With the gross provisionally winning bids for the auction at $3.96 billion on the A Block; $9.14 billion on the B Block; $1.27 billion on the E Block; and $4.75 billion on the (Upper 700 MHz) C Block, it is possible that the D block spectrum might garner anywhere from $3 to $7 billion at auction if sold without conditions.

Unfortunately, the current record before the Commission regarding the potential cost of constructing a nationwide interoperable broadband network for public safety is incomplete. While the record in this proceeding reveals a few estimates, these estimates are based, in large part, upon certain network, buildout requirements, and other assumptions regarding configuration that render the estimates imprecise as benchmarks.[7]

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[7] *See* Comments of Access Spectrum, LLC, Columbia Capital III, LLC, Pegasus Communications Corporation and Telecom Ventures, LLC, WT Docket Nos. 06-150, 01-309, CC Docket No. 94-102 at Attachment C, Declaration of Stagg Newman (filed September 29, 2006) (demonstrating that "the cost to Public Safety of an exclusive network covering 90% of the landmass of the continental United States would be $4.0 billion for a coverage only network and $8.4 billion for a network with the capacity to support the peak demand per cell site" (citations omitted)); *Ex Parte* Letter from Elizabeth R. Sachs, Counsel, Cyren Call Communications Corporation to Marlene H. Dortch, Secretary, FCC, PS Docket No. 06-229, WT Docket Nos. 06-150, 06-169 and 96-86 at 7-9 (filed June 26, 2007) (estimating a cumulative capital expenditure at $17.1 billion and a public safety specific capital expenditure of $5.3 billion in the period of 2008-2018 based on an assumed coverage of 99.3% of total U.S. population and 30 MHz of spectrum);

So while cost estimates of $4-$22 billion have been submitted, I'm pleased that we have taken the steps to obtain more accurate details regarding the potential costs of any proposed nationwide interoperable network in the *Second Further Notice.*

Question 4. During the hearing, Chairman Martin testified that the Commission had not conducted its own independent economic analysis of the public-private partnership for the D Block. Many entities have offered various suggestions with respect to the re-auctioning of the D Block. Does the Commission need independent economic analyses to determine which proposals are feasible? Would such analyses allow the Commission to make a more informed decision about how to proceed with the reauction of the D Block?

The Commission would benefit from independent economic analyses to determine the feasibility of individual proposals for a nationwide interoperable network via the public-private partnership model. While the private sector and private equity communities are equally well-equipped to provide such an analysis, I would caution that those communities have every incentive to skew the economic viability assessment in such a way to minimize their own financial burdens. Accordingly, I strongly believe that providing for such independent economic analyses would allow the Commission to make a more informed decision regarding how to proceed with the D block re-auction.

Question 5. The Commission applies the so-called "spectrum screen" to proposed mergers and acquisitions as part of its analysis of whether proposed transactions are in the public interest. The Commission does not apply the spectrum screen if a carrier acquires spectrum at auction. Does this asymmetrical application of the spectrum screen adequately protect consumers and promote the public interest? Should the Commission re-examine its application of the spectrum screen? Several reports indicate that both Verizon and AT&T are over the spectrum screen limit in a number of markets. Should the Commission take a closer look at those markets to ensure that consumers are not harmed by this increased spectrum consolidation?

I have previously raised concerns regarding the application of the spectrum aggregation screen in the merger context. Since spectrum is such a critical resource for wireless service providers to compete effectively, we must consider the input market of spectrum that is suitable for the provision of services in order to assess the increased likelihood of competitive harm in certain markets. With AT&T and Verizon now holding more than 95 megahertz of spectrum in several markets and both exceeding this amount in 5 of the top 10 markets, 10 of the top 25 markets, and in one out of five of the top 100

CostQuest Associates, U.S. Ubiquitous Mobility Study: Identification of and Estimated Initial Investments to Deploy Third Generation Mobile Broadband Networks in Unserved and Underserved Areas (submitted to CTIA on April 17, 2008) (estimating the cost of a "ubiquitous" 3G mobile broadband service infrastructure at $22 billion). *See also Second Further Notice* at ¶ 92 (estimating "that reducing the population coverage level from 99.3 to 98 percent would result in a potential cost savings for the D Block licensee of approximately $3.1 billion in capital expenditures and reducing the coverage level to 95 percent would result in a potential cost saving s of approximately $6.1 billion in capital expenditures" (citing Frontline Wireless, LLC Petition for Reconsideration at 22 (filed Sept. 24, 2007)).

markets, it becomes increasingly more important to review those markets to ensure that consumers are not harmed by this increased consolidation.

Office of Commissioner Robert M. McDowell
Federal Communications Commission
Washington, D.C. 20554

May 30, 2008

The Honorable John D. Dingell, Chairman
Committee on Energy and Commerce
United States House of Representatives
Washington, D.C. 20515

Dear Chairman Dingell:

Thank you for the opportunity to participate in the Telecommunications and the Internet Subcommittee's "Oversight of the Federal Communications Commission—the 700 MHz Auction" hearing on April 15, 2008.

I have attached my responses to the questions for the record that you submitted subsequent to the hearing.

Should you have any additional questions, please contact me at 202-418-2200.

Sincerely,

Robert M McDowell/aeg

Robert M. McDowell

Attachment

cc: The Honorable Joe Barton, Ranking Member
Committee on Energy and Commerce

The Honorable Edward J. Markey, Chairman
Subcommittee on Telecommunications and the Internet

The Honorable Cliff Stearns, Ranking Member
Subcommittee on Telecommunications and the Internet

Questions for the Record
The Honorable John D. Dingell

Answers from Commissioner Robert M. McDowell

1. At the hearing, each of the Commissioners expressed some level of concern about the relationship that developed between the Public Safety Spectrum Trust and its advisor, Cyren Call, in the months leading up to the auction. What aspects of the relationship do you find troubling? In your view, is there a role for a for-profit entity in the management of the proposed public-private network?

A: I am pleased that our second notice of proposed rulemaking, which was released on May 14, seeks comment on a broad array of issues pertaining to licensing the public safety spectrum located in the 700 MHz band. Our notice examines ways to more clearly define the role of the Public Safety Broadband Licensee, and seeks input about the appropriate role of advisors, and whether increased oversight is necessary, for instance. Under usual commercial circumstances, relationships among the various stakeholders would generally be considered arm's length. In this case, however, given that the transaction involves the auction of spectrum, the Commission has a responsibility to avoid undue or unfair leverage. I look forward to engaging with interested parties as we embark upon the public comment period.

2. Please explain the justification or need for a trust to hold the license for public safety's spectrum. Would it be consistent with the Communications Act of 1934 for the Federal Communications Commission to hold the license instead?

A: I do not believe that the only option for licensing public safety spectrum in the 700 MHz band is by trust. I am pleased that the Commission is seeking comment on this and related licensing issues in our second notice of proposed rulemaking. I look forward to hearing from interested parties regarding the pros and cons of the trust concept, as well as other options. I am also hopeful that, as we deliberate to find a satisfactory solution for licensing this spectrum, the expert Commission staff will fully participate in this process by developing and offering their ideas.

3. Some have suggested that the Commission should simply auction the 10 megahertz D Block free and clear of any conditions and use the proceeds of that auction to fund public safety interoperability efforts. Setting aside the fact that such a proposal would require congressional action, if the Commission were to pursue such a plan, would the Commission need to re-configure the public safety spectrum to address interference concerns? Would guard bands be necessary, and if so, would the guard bands take away from spectrum that has already been allocated to public safety or from spectrum that is part of the D Block? How much money does the Commission estimate that a reconfigured D Block would obtain at auction? How much money does the Commission estimate is

needed to build a nationwide interoperable broadband network on public safety's spectrum? Please include any economic analyses upon which you base your answer.

A: Even though public safety already had at its disposal 97 megahertz of spectrum in total to serve America's approximately two million public safety users – including 24 megahertz in the 700 MHz Band and 50 megahertz in the 4.9 GHz Band – the Commission allocated an additional 10 megahertz above and beyond what Congress gave to public safety in 1997. We did this to try to create an incentive for the private side of the public/private partnership to invest risk capital to build a nationwide public safety network suitable for 21st century challenges. In the absence of congressionally-appropriated funding for this network, the Commission concluded that this type of public/private partnership was the best way to jump-start funding and construction. At the hearing, all five commissioners acknowledged that congressional funding would be the optimal means to accomplish this task.

In the meantime, our second notice of proposed rulemaking seeks input on technical issues, as well as on valuations of certain spectrum bands, including the 700 MHz D Block. We also seek input on the costs associated with building a nationwide interoperable broadband network for public safety use. I look forward to engaging with interested parties on these important questions.

4. **During the hearing, Chairman Martin testified that the Commission had not conducted its own independent analysis of the economic viability of the public-private partnership for the D Block. Many entities have offered various suggestions with respect to the re-auctioning of the D Block. Does the Commission need independent economic analyses to determine which proposals are feasible? Would such analyses allow the Commission to make a more informed decision about how to proceed with the reauction of the D Block?**

A: Yes, independent economic analyses would assist us in our effort to make an informed decision as we proceed with the reauction of the D Block. The more information we have, the better. And, as always, we must proceed in an open and transparent manner, pursuant to the Administrative Procedure Act. Given the importance of the task ahead, I am pleased the Chairman will hold an *en banc* hearing on the D Block. I look forward to participating.

5. **The Commission applies the so-called "spectrum screen" to proposed mergers and acquisitions as part of its analysis of whether proposed transactions are in the public interest. The Commission does not apply the spectrum screen if a carrier acquires spectrum at auction. Does this asymmetrical application of the spectrum screen adequately protect consumers and promote the public interest? Should the Commission re-examine its application of the spectrum screen? Several reports indicate that both Verizon and AT&T are over the spectrum screen limit in a number of markets. Should the Commission take a closer look at those markets to ensure that consumers are not harmed by this increased spectrum consolidation?**

A: The Commission introduced this new economic analytical framework as part of its order approving the transfer of control of Dobson Communications Corporation to AT&T, Inc. in November, 2007. As set forth in the order, the Commission added 700 MHz band spectrum to its market screen for assessing spectrum suitable for provision of mobile telephony services. While it is certainly important that the Commission update its analytical tools from time to time, I expressed concern at that time that the need for such a screen was premature and introduced an unnecessary level of complexity into the Commission's market analyses.

The order concluded that 700 MHz band spectrum "not only is technically capable of supporting mobile services, but also is in many respects ideally suited for the provision of these services." This may be true; however, even seven months later, we have only an idea of how some auction winners intend to use this spectrum. In any event, the Part 27 licensing rules expressly welcome flexible uses within this band. And, at least one current operator is deploying mobile broadcast services. The order also concluded that 700 MHz band spectrum "is available on a nationwide basis" even though Congress determined that the spectrum will not be fully available until February 17, 2009, which, at that time, was fifteen months away.

The distinctions for the purposes of the market screen between the cellular, PCS, SMR, 700 MHz, AWS-1 and BRS spectrum bands remain unclear. First, the record in the Dobson-AT&T proceeding contained *no* information on this issue. Further, the capabilities of the 700 MHz band spectrum are undetermined until the band is licensed, cleared of incumbent users, built out, and used to provide services to America's consumers.

Responses to Committee Questions Regarding the Testimony of Steven E. Zipperstein
Vice President, Legal and External Affairs and General Counsel
Verizon Wireless

COMMITTEE ON ENERGY AND COMMERCE
SUBCOMMITTEE ON TELECOMMUNICATIONS AND THE INTERNET
U.S. HOUSE OF REPRESENTATIVES

Oversight of the Federal Communications Commission – the 700 MHz Auction

Hearing of April 15, 2008
Responses Provided May 28, 2008

Responses to Questions from the Honorable John D. Dingell

1. When Verizon held preliminary discussions with Cyren Call and the Public Safety Spectrum Trust (PSST) regarding the D Block, was Verizon informed that the PSST would require an annual spectrum lease payment? If so, did the PSST and/or Cyren Call detail how the proposed payment would be used?

Yes, Verizon Wireless was informed that the PSST would require an annual spectrum lease payment and was told, in very general terms, how the payment would be used. Verizon Wireless had two meetings with representatives of Cyren Call and the PSST in which the issue of a lease payment was raised. Although I was not present at either of these two meetings, my response is based on information conveyed to me by Verizon Wireless representatives who did attend.

The concept of a spectrum lease payment was first introduced to Verizon Wireless by Cyren Call's Chairman, Morgan O'Brien, in an October 18, 2007 meeting in Verizon Wireless's offices in Washington, D.C. Mr. O'Brien was joined in that meeting by four other Cyren Call employees. Harlin McEwen, Chairman of the PSST, participated by telephone. Neither Cyren Call nor the PSST provided information regarding the amount of the payment or how it would be used.

The spectrum lease payment was next discussed with Verizon Wireless in a November 28, 2007 meeting at Verizon Wireless's headquarters in Basking Ridge, New Jersey. Three Cyren Call employees attended that meeting, and no representatives from the PSST were present. This meeting followed publication of the PSST's Statement of Requirements (SoR), which provided a more detailed description of the proposed business arrangement between the PSST and the D Block Licensee, including a reference to an annual lease payment (though no information as to amount or purpose of the payment). At the November 28 meeting, in response to Verizon Wireless employees' request for more detail about the lease payment, Cyren Call explained that, as part of the Network Sharing Agreement (NSA), the D Block Licensee would be required to make an annual spectrum lease payment for each of the ten years covered by the NSA. Cyren Call's position was that the annual payment amount would be $50 million. Cyren Call further explained that the spectrum lease payment was intended to cover all of the costs of the PSST, including payments made by the PSST to Cyren Call. When asked how the $50 million figure was calculated, Cyren Call explained that it was a combination of Cyren Call's estimate of the value of the spectrum as well as the estimated costs of operating the PSST.

2. Aside from the requirements and obligations set forth in the Federal Communications Commission's Order concerning the D Block, were there any other aspects of Verizon's preliminary discussions with Cyren Call and/or the PSST that made Verizon reluctant to bid on the D Block?

Yes. As described in my testimony of April 15, 2008, Verizon Wireless ultimately decided not to bid on the D Block for a number of reasons related both to the rules established by the FCC in its *Second Report and Order* (Order) and to conditions proposed by Cyren Call and the PSST over the course of our discussions before the auction.

A. FCC Order

The FCC's Order established a set of rules that made it difficult for Verizon Wireless to justify a business case for bidding on the D Block, including the following:

- The FCC's Order requires the D Block Licensee to construct a wireless broadband network that covers 99.3% of the U.S. population in only 10 years. The D Block Licensee's obligation to build out the D Block to these specifications—providing new coverage over millions of square miles—is quite significant, potentially costing tens of billions of dollars.

- The FCC's rules left most of the details of the public-private partnership to be negotiated after the auction, including the rates PSST would pay for service, the technology and equipment to be used by public safety, the very definition of those who would be designated as "public safety users," and the framework for the relationship between PSST and the D Block Licensee. This created substantial uncertainty for Verizon Wireless, because it had no way of knowing what specific obligations it would be undertaking if it were to win the D Block.

- The FCC proposed a significant default penalty in the event that the D Block Licensee failed to reach agreement with the PSST over the terms of the network sharing agreement that would govern the partnership. While a default penalty is normally an appropriate mechanism to deter speculative bidding, it represented a huge financial risk for prospective bidders (including Verizon Wireless) given the tremendous uncertainty created by the current rules. If we had bid on and won the license, but failed to negotiate an agreement acceptable to public safety and the FCC, we would have been forced to forfeit the license ***and*** pay a penalty in an amount equal to ten percent of our winning bid ***plus*** the difference between our winning bid and the amount the FCC would collect in a subsequent auction of the D Block.

B. PSST & Cyren Call

In order to evaluate fully the feasibility of bidding on the D Block, Verizon Wireless met with the PSST and Cyren Call prior to the auction to assess the full extent of the duties and obligations of the D Block Licensee – especially the obligations that the FCC had not fully defined in the Order.

Meetings With The PSST. In our meetings with the PSST, which were held in the Spring and early Summer of 2007, before Cyren Call was retained as PSST's advisor, the PSST provided us with very little specific information that would enable us to make an informed judgment about whether the partnership represented a sound business opportunity. Nevertheless, none of the information we were provided heightened our level of concern. Thus, while the FCC's rules were viewed to be stringent, and we did not have detailed information about the terms of the relationship envisioned by the PSST, we remained interested in exploring whether a viable partnership could be negotiated with the PSST.

Meetings With Cyren Call. Cyren Call provided more specific information during our subsequent meetings in October and November 2007. The more detail Cyren Call provided regarding how the public-private partnership would work, however, the more concerned we became with the viability of the endeavor. Our primary concerns included the following:

- Cyren Call indicated that the PSST would "own" the right to provide service to public safety. It would purchase wholesale minutes from the D Block Licensee and resell service to public safety users. As a result, after spending significant sums to buy the D Block and potentially billions more to build it out, Verizon Wireless would not have the opportunity to serve public safety customers directly; in fact, it stood to lose those valued public safety customers it now serves. We were surprised by this aspect of the proposal because it appeared to us to be inconsistent with the structure envisioned by the FCC. In particular, this concept would, in effect, create a for-profit entity at the heart of the business relationship where the FCC had intended a non-profit to be – and, as a result, this for-profit entity would end up competing with the D Block Licensee for public safety customers.

- Cyren Call took a broad view of the term "public safety," defining it to include not just first responders but also other state and local government employees and certain commercial users who, on a regular basis, work with public safety (*e.g.,* utility workers, transportation workers, etc.). This expanded definition raised serious concerns about our ability to continue to serve our current customer base, which includes hundreds of thousands of federal, state, and local government users.

- Cyren Call also informed us that the D Block Licensee would not be allowed to recoup any portion of its capital investment through the wholesale rates it charged the PSST for network access. Cyren Call said this provision was required by the FCC's rules (an interpretation with which we did not agree); and in any event, Cyren Call said, it was justified because the PSST would be contributing 10 MHz of adjoining spectrum for the D Block Licensee's use. Yet, as already noted, the D Block Licensee also would have to make a substantial spectrum lease payment to the PSST to account for the value of the spectrum the PSST was contributing to the partnership.

- Days before the FCC's so-called "quiet period" was scheduled to commence, Cyren Call informed us that the D Block Licensee would be required to make an annual lease payment for access to the public safety spectrum. Cyren Call's position was that the annual payment amount would be $50 million. Such a lease payment would have further undermined the commercial viability of the D Block band.